

P. K. Gode Studies—Vol. VI

**STUDIES IN INDIAN CULTURAL
HISTORY**

Vol. III

BY

P. K. Gode, M. A., D. Litt. (Paris)

Published by

**PROF. P. K. GODE COLLECTED WORKS PUBLICATION
COMMITTEE,**

B. O. R. Institute, POONA 4

1969

Price Rs. 30

Printed by Shri B. B. Sardesai, B.A., LL.B., at the Veda-Vidya Mandir,
41, Esplanade, Poona 2, and

Published by Dr. A. D. Pusalker, M.A., LL.B., Ph.D. and Prof. H. A. Gore, M.A.,
Secretary, Prof. P. K. Gode Works Publication Committee,
B. O. B. Institute, Poona 4.

(ii)

FOREWORD

Dr. Gode's sudden death on the 28th of May 1961 was a serious blow to the P. K. Gode Works Publication Committee, and paralysed its activities for quite some time. Five Volumes of Dr. Gode's Writings had been published between 1953 and 1960—two by our Committee, two by the Bharatiya Vidya Bhavan, Bombay, and one by the Vishveshvaranand Vedic Research Institute, Hoshiarpur. Our Committee had decided to publish two more Volumes, and their printing had already started while Dr. Gode was still living. But the work had to be suspended after Dr. Gode's sudden death and was resumed only a couple of years ago. After a careful consideration of the matter, the Committee also decided that the two Volumes, which were being printed separately, should be issued as two parts of a single Volume, namely, Volume VI. The present Volume thus extends over 360 pages and comprises 31 research papers, of which 15 are included in Part I, and 16 in Part II.

The papers in this Volume cover literary, historical, and cultural subjects, and, with a view to facilitating reference, papers bearing on the same topic have been presented serially. Among the topics dealt with in the papers in Part I, may be mentioned History of Paper and Paper Industry; Use of Cloth for Letter-Writing; Ink-Manufacture; History and Progress of Cataloguing of Sanskrit and other Manuscripts; Location of Kavindrīkrya's Library at Beswera; Illustrated MS of the Bhāgavata Purāṇa; Observations on Study; History of Raigavalli, of Soap-Nuts, Soap and Washermen, and of the Practice of Massage; and Use of Ganges Water by Muslim Rulers. The Second Part contains Papers on Castes, Social Life and Cultural History and the topics include Antiquity of Kārṭāḍe Brahmins and of the caste-names Silli and Padmasāli, Gībit, and Śeṇavi, Social, Economic and Industrial Life of Bengal; Provincial Social Customs and Manners; Antiquity of the Custom of Holding Grass in the Mouth as a sign of Surrender; and History of Glass Vessels and the Glass Bangles, of Spectacles in India, of Tin-Coating of Metallic Utensils, of Mosquito-Net, of Rope-Manufacture, and of Wax-Candles.

It is rather unfortunate that the usual Subject Index by Prof. N. A. GORE should be missing in this volume. As its inclusion would have delayed the publication of this already long over-due volume, the Committee (including Professor GORE) decided to issue the volume without that Index.

The Committee expresses its deep sense of gratitude to MM. Dr. P. V. KASHI, National Professor of Indology, and Professor K. K. HANDEGOL, former Vice-Chancellor of Gauhati University, two esteemed friends and admirers of Dr. GODE, who have made substantial financial grants towards the publication of this Volume. The Committee would also like to take this opportunity of thanking the large number of Dr. Gode's friends who have promoted the publication of this and the earlier Volumes

in various ways. Shri S. N. SAVADI of the Bhandarkar Oriental Research Institute was mainly responsible for the correcting of proofs. He also attended to the administrative side of the printing and the publication of this Volume. The Committee expresses its high appreciation of the selfless service rendered by Shri SAVADI on account of his reverence and regard for Dr. GODE, under whom he had the privilege of working for many years. The Committee also conveys its hearty thanks to Shri S. R. SARDesai of the Veda-Vidya Mudranalaya, Poona, and all the workers of his press for the neat and careful printing of this Volume.

With the publication of this Volume, most of the important papers of Dr. GODE may be said to have now appeared in book form, and the Committee may be said to have more or less achieved its objective. The following table will give an idea of Dr. Gode's writings published in book form :—

P. K. Gode Studies	Title	Pub lisher
Vol. I	<i>Studies in Indian Literary History</i> —Vol. I (Singhi Jain Series No. 37) 1953, pp. 570 (out of print)	Bharatiya Vidya Bhavan, Bombay 7.
Vol. II	Do—Vol. II (S.J. Series No. 38), 1954, pp. 560. (out of print)	—Do—
Vol. III	Do—Vol. III, 1956, pp. 270.	P. K. Gode Works Publication Committee, B. O. R. Institute, Poona 4.
Vol. IV	<i>Studies in Indian Cultural History</i> , Vol I (Vishveshvarananda Indological Series No. 9), 1961, pp. 514.	Vishveshvarananda Vedic Research Institute, Hoshiarpur.
Vol. V	Do—Vol. II, 1960, pp. 298.	P. K. Gode Works Publication Committee, B. O. R. Institute, Poona 4.
Vol. VI	Do—Vol. III, 1969, pp. 365.	—Do—

P. K. Gode Works Publication Committee,
B. O. R. Institute, Poona 4.
28th May, 1969. }

R. N. DANDEKAR
A. D. PUSALKER
N. A. GORE

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P. K. Gode Studies—Vol. VI, Part 1

1. MIGRATION OF PAPER FROM CHINA TO INDIA— A.D. 105-1500

Bühler in his *Indian Paleography*¹ published in 1896, makes some remarks about the use of *paper* in India. Some points from these remarks may be noted here:—

- (1) Between B.C. 350 and A.D. 1300, a period to which Bühler's work refers, paper was hardly known or at least little used in India.
- (2) The introduction of paper is only due to the Muhammadans.
- (3) According to Rajendralal Mitra paper was used in Malwa during the 11th century, as proved by a "letter writer", by king Bhoja of Dhārā.
- (4) The oldest paper MS in Gujarat is dated A.D. 1223-24.
- (5) Peterson discovered at Anhilvād Pāṭan paper MSS dated A.D. 1327-28 and 1337-38.
- (6) Ancient paper MSS from Kashgar were all of them written in Central Asia. They are covered with a layer of gypsum and it is doubtful if they are of Indian origin.

In his book on *Indian Textual Criticism* published in 1941 Dr. S. M. Katre observes²: "So far there has not been any consistent or sustained effort at the study of the material of these (*paper*) MSS as it comes down to us from different centres and through different periods." It will thus be seen that there is much scope for a historical study of the introduction of *paper* into India and its increasing use and manufacture from indigenous materials on Indian soil. To trace the migration³ of paper from China to India through different periods of history is a difficult task for a student like myself, not conversant with the first-hand sources of history available in non-Indian languages or literature. I shall, therefore, record in this article only a few references to *paper*, having a bearing on its history with special reference to India, gathered by me during the course of my studies.

A.D. 105 —The credit of the invention of paper goes to a Chinaman Ts'ai Lun, who offered his product to the throne in A.D. 105. A scholar

¹ *Paper Making* by K. B. Joshi, 1944, pp. 205-222.

1. English Trans. Published in *Indian Antiquary*, Vol. XXXIII, 1904, p. 97.

2. Page 8.

3. U. Weyriffe on p. 11 of his *Arabica and Islamica* (London, 1940) makes the following remarks about *paper*:—"About a hundred and twenty years after Muhammad's death.....the use by the Arabs of *paper* began about A.D. 750, centuries before its use in Europe, and the great growth of Arabic literature began about A.D. 800, though very little paper of our 9th and 10th centuries with Arabic writing upon it has been preserved." These remarks are consistent with the date A.D. 866 of a Muslim paper MS referred to later in this paper.

Ta'ui Yüan, who died 37 years after paper was first made wrote to a friend as follows:—

"I send you the works of the Philosopher Hsü in ten scrolls unable to afford a copy on *silk*. I am obliged to send you one on *paper*." Though "The Development of the Book in China" has been studied, the development of the book in India remains to be studied and investigated. According to A. W. Hummel¹ the story of the Chinese book seems to have developed step by step from the *wooden or bamboo slip* to the *silk or paper scroll*, from the scroll to the folded album and from the album to the paged book of modern times. The chronology of this story² prior to the invention of paper is not generally known to ordinary readers in India and hence I note it below:—

B.C. 13th-14th Centuries—Incised divination *bones* with inscriptions were discovered in 1891 in Honan Province. They show that books existed at this time (Shang Dynasty). The Chinese pictograph for a "volume" appears on these bones and on early bronzes.

B.C. 1st Century—Thousands of inscribed slips were found in the desert sands of Chinese Turkestan.

A.D. 96—Seventy-eight *wooden* slips, containing an inventory of weapons were discovered by Folke Bergmann of Sven Hedin's Expedition (about 12 years ago) in Central Asia.

A.D. 105—Invention of paper by a Chinaman Ts'ai Lun as noted above.

1. Vide pp. 71-76 of the *Journal of the American Oriental Society* (June 1941). In the article on *paper* in the *Encyclopaedia Britannica* (p. 229 of Vol. 17-14th Edn.) a short history of Paper is given from which I note some important points:—

(i) The art of making paper from fibrous matter seems to have been practised by the Chinese at a very distant period. It is traced by some writers to 2nd century B.C.

(ii) In A.D. 751 the Chinese attacked the Arabs in charge of Samarkand. The Arab Governor repelled the attack and captured Chinese prisoners skilled in *paper-making*, who imparted their knowledge to the Arabs. Hence the Arabian manufacture of paper and the large number of Arabic MSS on paper.

(iii) Paper was probably brought into Greece from Asia about the end of 11th century.

•

2. Cf. *Artha-Sāstra* (c. B.C. 320) of Kauṣilya, Chap. X of Book II—Procedure of forming *Royal Writs*. The qualifications of a writer (विद्वान्), the forms of writing and allied matters as laid down in this chapter show the degree of perfection the art of writing had reached in Kauṣilya's time. This chapter reminds us of Bacon's dictum "Writing maketh an exact man" and it is exactitude, which is the very basis of Kauṣilya's treatise.

It is supposed that the *Art of Writing* originated in Egypt. There is an ancient statue of an Egyptian scribe. A photograph of this statue is given by Davies in his *Outline of the History of the World* (p. 22 of 1917 Edition). We can visualize a विद्वान् or scribe of Kauṣilya's time writing royal writs on *hieroglyphs or palm leaves* in the manner of the Egyptian scribe, who wrote in ink on *papyrus* with a reed pen.

According to Sir Aurel Stein¹ the paper invented by Ts'ai in A.D. 105 was made of *old linen rags, fishing nets, bark of trees and raw hemp*.

c. 2nd Century A.D.—Mr. G. Macartney, special assistant for Chinese affairs at Kashgar discovered 6 sets of MSS known as Macartney MSS. Set VI of these MSS was picked up from the ground at Kuk Gumbaz. Its material is a kind of *soft paper* with a darkish colour. According to Hoernle these MSS belong probably to the 2nd century A.D. Several folios of these MSS have been reproduced in the *Journal of the Asiatic Society of Bengal* (1897).²

c. 3rd Century A.D.—For students of the history of *rag paper* the discoveries of Sir A. Stein at a watch-station in Central Asia are very important. He discovered some documents on *rag paper* and Prof. Wiesner analysed them and concluded that the paper of these documents represented a particularly early stage in the evolution of pure *rag paper*. This analysis removes the previous belief, according to which the origin of *rag paper* is ascribed to an Arab invention first made in Samarkand about the middle of the 8th century A.D. and then spread through the near-East to Europe. The documents discovered by Stein are called Sogdian documents and they are written in early Sogdian language. They were found along with records of the early years of the 1st century A.D. and are not much removed from the Chinese invention of paper in A.D. 105.³ As these documents were found in parts far away from the Central Asian border province, Stein concludes that the writers of these documents were of a foreign origin and that they adopted Chinese paper for their use very early. Evidently the foreigners adopted the Chinese paper more rapidly than the people of China themselves.

1. Vide his Report on his Explorations in Central Asia and Western-most China called *Serindia* (Sec. 4, Chap. XVIII, pp. 771-7).

2. Vide p. 134 of Katre's *Indian Textual Criticism*, 1941.

3. The word *paper* is derived from *Papyrus* (see p. 220 of Ency. Brit. Vol. 17-14th Edition). I am not concerned here with the history of *papyrus*. The use of *papyrus* in ancient Egypt is well illustrated by Egyptian wall-paintings. In the *Tomb of Puyemre* (about B.C. 1450) there are paintings of *Papyrus Harvest*. These pictures show "how the stalks were pulled up in the marshy lakes, tied up into bundles and carried ashore. The beginning of the paper-making is also taking place, for the figure to the right is peeling off the hard exterior coating from one of the stalks" (Vide p. 7 of *Egyptian Wall Paintings of XVIII and XIX Dynasties*, Metropolitan Museum of Art, New York, 1930).

There is a *papyrus* of 2nd century A.D. containing a Greek play with *Kannada* passages. These passages are considered by Grierson as the oldest specimen of *Kannada*. The *papyrus* was discovered in 1897 by the Biblical Archaeological Association at Oxyrhynchus in Lower Egypt and is numbered 413. Dr. Shama Shastry has identified the *Kannada* passages. (Vide *Journal of Mythic Society*, Bangalore, 1928—Monograph on this *Papyrus* by S. Srikantaiya).

A.D. 312—According to Stein the paper used for Sogdian documents shows no trace of "Sizing" with starch or other gelatinous matter, which is found in later papers found in Chinese Turkestan and which already appears in a *Chinese document* of A.D. 312.

A.D. 317—Mr. John C. Fergusson writing in *T'ien Hsia Monthly* (May 1940) refers (on p. 434) to a Chinese calligraphist Wang Hsi-Chih of A.D. 317. He was supreme in his art, which is described by Fergusson as follows:—"His glory was to be able to extract from the *paper* on which he traced with black ink the lines and curve and hooks of his characters such delectable harmonies for the eye of man as no one else can hope to equal."

c. A.D. 500—Rev. F. Weber,¹ Moravian Missionary in Leh in Ladak received some MSS from an Afghan merchant, who found them in a place near Kuigar, 60 miles south of Yarkhand in the Chinese territory. These MSS are all written on *paper* and form 2 groups, (i) Indian, and (ii) Central Asian. The *Indian Group* is written in *North-Western Gupta Characters*, while the other group is written in *Central Asian Nāgarī*. According to Hoernle all of these MSS are *not later than c. A.D. 700*. Hoernle dates them at *about c. A.D. 500*.

A.D. 671—Though *paper* was invented in China in A.D. 105 its migration to India appears to have been very slow. At any rate it was not as rapid as the early Chinese travellers to India. When the celebrated Chinese traveller I-tsing visited India in the latter part of the 7th century with a desire to copy Sanskrit MSS for being taken to China he could not get *paper* in India and was, therefore, compelled to order some *paper* from China as will be seen from the following extract from his *Record*²:—

"At the mouth of the river Bhog(j)ā I went on board the ship to send a letter (through the merchant) as a credential to Kwang-Chou (Kwang-tung) in order to meet (my friends) and ask for *paper and cakes of ink* which are to be used in copying the *sūtras* in the Brahma language (Sanskrit) and also for the means (cost) of hiring scribes."

It is clear from the above extract that *paper* either indigenous or of Chinese manufacture was not available in India in the 7th century, though it was not quite unknown in India at the time as will be seen from the following reference to the use of *paper* found elsewhere³ in I-tsing's *Record*:—

1. Vide p. 135 of Katre: *Indian Textual Criticism*.

2. Vide p. xxxiv of Introduction to I-tsing's *Record* (671-695) Trans. by J. Tak Kusu, Oxford, 1896.

3. Vide p. 150 of *Record*. Vide also p. 203, where I-tsing narrates the story of his teacher, who tore all his books and put them into mortar for being used for a statue of Vajra then in preparation. His pupils said:—"If it is necessary to use *papers*, let us use blank *papers* instead." The teacher said that he had been led astray by the literature in the mortar.

"The priests and laymen in India make *Caityas*, or images with earth, or impress the Buddha's image on *silk or paper* and worship it with offering wherever they go."

If Taka Kusu's translation of the original Chinese passage corresponding to the above extract is correct we shall not be wrong in inferring that *paper* was known to Indian priests and laymen in the 7th century A.D. but that it was a rare commodity used perhaps for religious purposes occasionally. Possibly on account of the Chinese contact with India some paper was already introduced into India prior to the visit of I-tsing but its wide-spread use in large quantities or even its manufacture on Indian soil was not given attention to owing to the system of using the *bhūrja* and *palm leaves*¹ for writing purposes so common in those days. Speaking of the oral transmission of the *Vedas* I-tsing observes:—(P. 182 of *Record*) "The *Vedas* have been handed down from mouth to mouth not transcribed on *paper or leaves*."²

It appears from the above evidence that *paper* was not quite unknown in India in the 7th century A.D. but it failed to oust the *bhūrja* and the *palm-leaf*³ owing to the orthodox tendency of the Indians generally in not adopting foreign things unless compelled to do so by political powers or by dominant cultural contacts, which saturated the Indian life in an overwhelming degree in any given period of history.

A.D. 751—In the history of paper given in the *Encyclopaedia Britannica*⁴ we are told that in A.D. 751 Samarkand, then in charge of an Arab Governor was attacked by the Chinese. The Governor repelled the attack of the Chinese and pursued them, making prisoners of some Chinese, who knew the art of making *paper*. These prisoners imparted the art to their Arab masters and in this manner the Arabs began to manufacture *paper*. A large number of Arabic MSS on *paper* is due to

1. *Hsui Li* in the *Life* of his teacher *Hsueh-Tsiang* who visited India (A.D. 629-645) refers to the Indian use of *palm-leaf* for writing purposes as follows:—

"We come to (Kongkasapura)..... To the north of the city is a forest of *Talas* trees about 30 li in circuit. The leaves of this tree are long and of a shining appearance. The people of these countries use them for writing on and they are highly valued" (Vide p. 146 of *Life of Hsueh Tsiang*, Trübner, 1911). After the death of Hsueh-Tsiang in A.D. 664, I-tsing started for India in A.D. 671 and returned to China in A.D. 693.

2. Cf. Max Müller's remarks on writing (p. 257 of *Ancient Sanskrit Literature*, Panini Office, Allahabad, 1912). I note some points from these remarks:—(1) *Rgveda* Hymns have been preserved through "unsided efforts of memory", (2) There are references to writing in the *Old Testament*, (3) There is no mention of writing in Homeric hymns, (4) There is no allusion to writing in the *Bṛhadhara* period. (5) Writing was possibly introduced towards the latter half of the *Sūtra* period.

3. Kauṣilya in his *Artha-Śāstra* (c. B.C. 320) mentions in his list of forest products, *birch* (वृक्ष) and *palm* (पल्लव) yielding leaves (पत्र) which the commentary explains as writing material (Vide p. 108 of Shama Shastri's Trans. 1929).

4. Vide p. 229 of Vol. 17 of *En. Br.* (14th Edition).

this incident. Sir Aurel Stein does not believe in this account as he states that the Sogdian documents on *rag paper* discovered by him, remove the belief so far held about the Arab invention first made at Samarkand in the middle of the 8th century A.D. and then spread through the near-East to Europe.

Before A.D. 851—Sulayman¹ the Arab Geographer refers to the Chinese use of paper for sanitary purposes as follows:—"The Chinese do not clean with water after calls of nature, but wipe with *paper*." If this statement is correct we have to suppose that *paper* was then very cheap in China for being used for sanitary purposes and further that the Chinese were pioneers in this custom now common in Europe. Evidently the European use of paper for toilet purposes is no modern scientific invention.

A.D. 866—Mr. G. R. Kaye² in his account of the Bakhshali MS states that "the art of *paper* making appears to have been practised by the Chinese at a very early date. From the Chinese the Muslims learnt the process in the 8th century and they introduced it into Europe and also India about the 12th century. Among the earliest Muslim *paper* MSS now preserved one was written in A.D. 866, others in A.D. 974, 980, 990, etc. The earliest Indian *paper* MSS were written in A.D. 1231 and 1343. The earlier one measures 6 × 4 inches (ratio 1 : 5) and the other 13½ × 5 inches (ratio 2 : 7)."

A.D. 904-5—In 1938 Messrs. Bernard Quartrich Ltd. of London announced for sale a MS of a "A Tenth Century Koran" in *cufic* characters³ in 4 volumes, each volume containing a note in Persian showing that the MS was at one time property of a mosque in Persia. The translation of the note as recorded in the catalogue is as follows:—"This mosque was repaired by Ahmad b. Abi-al-Qāsim al Khaya-qāni in the year 292" (= A.D. 904-5). As this MS is written on *vellum* or *fine parchment* we may not take it into consideration in our history of *paper*.

A.D. 901-995—In 1940 and 1943 Lionel Giles published two articles on *Chinese dated MSS* ranging in dates from A.D. 901 to 996 in the *Bulletin of the School of Oriental Studies*,⁴ London. These dated documents in the Stein collection show the attention of the Chinese to chronology unlike many of our writers of Brahmanical MSS, which lack in chronology and hence hinder the reconstruction of history on documentary evidence.

1. Vide p. 96 of S. M. H. Nainar: *Arab Geographers' Knowledge of South India*, Madras University, 1942.

2. Vide p. 9 of *Arch. Surv. of India*, Vol. XLIII (1927). *The Bakhshali Manuscript* by G. R. Kaye.

3. *Catalogue* No. 550 (1938) pp. 87-87, Item No. 257 (Koran).

4. Vol. X, Part 2 (1940) pp. 317-344 and X, Part I (1943) pp. 148-171.

A.D. 997-1022 —Das Gupta¹ makes the following remarks about Chinese *paper currency* in his book on "*Paper Currency in India*."

"It was the country Shuh, now the province of Szechhuen, into which a true *paper money* was first introduced.... A certain Chang-yung brought them into circulation, in order to supply the *iron money* which was too ponderous and inconvenient. These assignats were called *Chetse* or cuts. Under the sign of Chiu-tsung of the Sung (from 997 till 1022) this example was followed and assignats were made under name of *Keaontze* or bills of exchange... Every *Keaontze* represented one ounce of pure silver."²

A.D. 1089 —In his *Catalogue of Jammu MSS* (1894), p. 8, M. A. Stein records a paper MS of *सप्तम्य भाषण* dated A. D. 1089.

A.D. 1180 —Mr. R. A. Sastri³ in his article "On Old MSS" states that "paper MSS begin with the date 1236 Samvatsara i. e. A. D. 1180."

A.D. 1223 —The oldest dated paper MS in Gujarat referred to by Bühler on p. 97 of his *Indian Paleography* is dated A.D. 1223-24.

A.D. 1231 —Mr. G. R. Kaye mentions the earliest Indian paper MS written in A.D. 1231.

A.D. 1298 —Morco Polo refers to the *paper-money* of Tartar Princes.⁴

A.D. 1310 —Gough in his *Papers* (p. 24) mentions a paper MS dated 1310 A.D. This is a MS of *Bhāgavata* (p. 16).

A.D. 1320 —A work on medicine by Vaṅgasena called the *Vaṅga-datta Vaidyaka* is represented by a paper MS in the Govt. MSS Library (No. 352 of 1879-80) at the B. O. R. Institute, Poona. It is dated *Samvat* 1376 = A.D. 1320 and is well preserved.

A.D. 1323 —The *Avesta Codex K 5* reproduced by the University Library, Copenhagen in 1939 was copied on *paper* in *Samvat* 1379 (17th November A.D. 1323) at *Stambhatīrtha* or *Khambāyat*.

A.D. 1345-50 —Mohammad Taghlakh introduces *paper money* into India.

A.D. 1395 —A Marathi document⁵ dated 7th December 1395 uses the term "*Kāgad*" for paper or document. This document hails from Poona District and is a *Vatanpatra* of Govind Honap Deshpande of *Koḍhāpā*.

1. Published 1927, p. 1.

2. Mohammed Taghlak (A.D. 1325-1351) introduced *paper-money* in his dominions, causing confusion and distress to his subjects. He then issued copper-tokens instead of the *paper notes*. (Vide p. 405 of *History of India* by Elphinstone, 1874).

3. Vide p. 125 of *Bulletin of Ramavarma Research Institute*, Vol. VI, Part II (July 1938).

4. *Travels* ed. by Thomas Wright, London, 1901, p. 215-18.

5. Vide *शिवचरित्रसाहित्य* Khanda 7, B. I. S. Mandal, Poona, 1938, नं. ३० dated 7th December 1395. (तन्हेकर देवपदि कैफियत).

"आम्ही ज्या कामास जमान होऊन आपला कागद गोविला"

A.D. 1396—A MS of *Rabhadeva-caritra* etc.¹ containing portions written on palm-leaf and paper was copied in *Samvat* 1452—A.D. 1396. It mentions the term *Kāgad*.

A.D. 1406—In the account of Bengal by Mahaun² the Chinese interpreter to the Chinese embassy that visited Bengal in A.D. 1406, he refers to the *manufacture of paper in Bengal* from the bark of a tree. This paper, he says, is smooth and glossy like a deer's skin.

This reference to the manufacture of paper in Bengal made by a Chinaman is very important as it has a direct bearing on the history of Indian paper industry. Though paper first makes its appearance in *Indian Paleography* about A.D. 1000 it is difficult to believe that its manufacture in large quantity was commenced by Indians during the first 300 years of its advent. It would be reasonable to suppose that between A.D. 1000 and 1300 the use of paper had not become very much current in India owing possibly to the scarcity of imported paper. It was only when Indians began to manufacture paper from indigenous material that it could gradually replace other materials like the palm-leaf, the *bhūrja*, parchment, cotton-cloth, etc.

c. A.D. 1520—Though paper was manufactured in Bengal and elsewhere in India before A.D. 1406 the Mogul Emperor Baber (A.D. 1483-1530) praises *Samarkand paper* in his celebrated *Memoirs*³ :—

"The best paper in the world comes from Samarkand. The species of paper called *juaz* comes entirely from Kanegil which is situated on the banks of *Abe-Siáh* (Black water) also called the *Abe Rahmet* (or water of Mercy)."

Evidently *Samarkand paper* had a great history in Baber's time as proved by the belief about the Arab invention of paper in the 8th century A.D., which persists even now in the writings of responsible scholars as we have already seen in this paper.

1. Vide p. 82 of *Prasthanagraha*, by A. M. Shah, Ahmedabad, 1937—Colophon—

“बोधसक सुप्रहसि तिम्योगली श्री लखे ।

तथा श्रीरघुमदेवचरित्रं १२ सहस्रं कागसे पंच पुस्तिका
तथागच्छ नायक श्रीदेवकुंदरसूरीणामुपदेष्टेन सं. १५५२.

श्रीवल्लभे लेखिता इति मद्रं ॥ ६ ॥”

2. Vide p. 159 of *Sardesai Comm. Volume* and *JRAS* 1895, 529-533.

3. By Erskine. 1826, p. 52.

4. Vide p. 229 or Vol. 17 of 14th Edition. The following facts from this article on paper are noteworthy :—

(i) A.D. 1102—Oldest document on paper is a deed of King Roger of Sicily.

(ii) A.D. 1122-1150—First mention of rag paper by Peter, Abbot of Cluny in his tract.

(iii) c. A.D. 1150—Moors in Spain manufacture paper.

(iv) A.D. 1231—Frederick II forbade use of paper for public documents.

(v) A.D. 1263—In the laws of Alphonso paper is referred to as cloth parchment.

(vi) A.D. 1310—Records of the Merton College, Oxford, show the purchase of paper.

The *Encyclopaedia Britannica*¹ devotes some space to the migration of paper to Europe and America. but no attention is paid by the writer of the article to the migration of paper to India from China, its far-off home from A.D. 105. My object in giving the foregoing brief but factual outline of the migration of paper from China to India will, it is hoped, rouse the curiosity of scholars and laymen alike as we are now passing through a period of paper scarcity to such an extent that at times we entertain the idea of commencing to write our literary productions on the palm-leaf and *bhūrja* in the manner of our worthy ancestors, whose continuous endeavour to preserve our ancient learning by recording it on some durable material still excites our admiration and instills in us a spirit of reverence for their methods of transmission and dissemination of literature, which is the glory of mankind in every age and clime.

Prof. H. R. Kapadia in his article on *Outline of Palaeography* published in *Bombay University Journal* (May, 1938) p. 105 makes the following remarks about paper and its antiquity :—

"Though the preparation of paper was known in India as early as 3rd century B.C., it seems that in ancient times Jain works have not been written on it. For, it seems that it was used perhaps for the first time during the rule of Kumārapāla and Vastupāla as can be seen from Jinamañḍanagaṇi's Kumārapāla-Prabandha (p. 96) and Ratnamandira-gaṇi's *Upadeśataraṅgiṇi* (p. 142)". In footnote 19 on this passage Prof. Kapadia adds :—"From these two references we see that the word paper is translated as कागद् and कद्गल (Kadgala). The word कागद् occurs in Mānavijaya's commentary (Pt. I, p. 167) on his own work *Dharma-Saṃgraha*. In certain works we come across the corresponding word कागद्."

Though there is some controversy² about the origin of the word *China*, which is derived from *Ts'in* dynasty (B.C. 249—A.D. 220) it is doubtful whether paper manufacture was known in India as early as 3rd century B.C. as observed by Prof. Kapadia. "The earliest story of

1. From a comparison of the chronology of the migration of paper to Europe with that for its migration to India it appears that the two migrations have been almost synchronous say between A.D. 950 and 1150. The paper records preserved in India as in Europe date from A.D. 1080 onwards. The history of the transitional stage of this migration needs to be reconstructed with full details, if such a study has not already been attempted by any scholar already.

Davies (in his *Outline of the History of the World*, Oxford, 1937, pp. 285-86) speaks of the contribution of Moslems to the intellectual life of mankind by the art of manufacturing paper. "They certainly did not discover this for themselves (they probably learnt it from the Chinese) but they were undoubtedly the means of its introduction into Europe. Before this time books had to be written on papyrus or parchment but after the Arab conquest of Egypt Europe was cut off from the papyrus supply."

2. Vide pp. 4-5 of *Indian Literature in China and the Far East*, by P. K. Mukherji, 1931 (Calcutta).

Sino-Indian contact is connected with Emperor Hiao-Wu (B.C. 140-80)¹ and "the starting point of Sino-Indian intercourse is generally put at A.D. 61." If these statements are correct, it is difficult to believe the introduction of the art of *paper* manufacture into India from Chinese sources prior to A.D. 105. If it is supposed that paper manufacture in India, prior to the Chinese invention of paper in A.D. 105, was indigenous, we have to point out that no reliable evidence in support of this supposition has been recorded by competent scholars. Under these circumstances we have to believe in the gradual migration of paper from China to India as outlined briefly in this paper from A.D. 105 onwards.

Prof. Kapadia states that *paper* was used "perhaps for the first time during the rule of Kumārapāla" who was king of Gujarat from Vikrama Samvat 1199 to 1230 (A.D. 1143-1174).² This statement is quite in harmony with the data recorded in the present paper.

The Mahārāṣṭra historian Rajawade³ makes the following remarks about the introduction of paper into India :—

"About 50 or 60 years before 1326 another material for writing on became current. This material is *paper* (Kāgad). There are some remote references to the writing on *paper* in the *Jñāneśvari*."

The *Jñāneśvari*, was composed in A.D. 1290 and as we have already pointed out *paper* MSS of A.D. 1089, 1180, 1223 and 1231 the remarks of Rajawade quoted by me are fully warranted by the dates of these MSS on chronological grounds.

In a Marathi work⁴ published at Bombay in 1884 a Persian *Farmān*⁴ dated A.H. 717 (Śaka 1221) A.D. 1299 is reproduced (Appendix A) from a copy of it dated A.D. 1705. This *Farmān*, if genuine, must have been written on *paper* but as it is reproduced from a late copy of it dated A.D. 1705, I am not in a position to draw any conclusions from it, even though it was admitted in the court in A.D. 1883 and translated into

1. Vide p. 2 of *Life of Hematandra* (Trans. by Dr. M. Patel). S. J. Series Vol. II, 1936. Jinamadana, the author of *Kumdrapala-Caritra* completed this work in A.D. 1435-36. *Dharma-Saṅgraha* of Mānsvijaya was composed in A.D. 1681 (Vide p. 594 of Winternitz, *Indian Literature*, Vol. II (Calcutta). No wonder that Mānsvijaya mentions 𑀧𑀺𑀢𑀺 in his comm. on his own *Dharma-Saṅgraha*.

2. *Āitiḥāsik Prasthānā* (B. I. S. Mandal, Poona, 1928), p. 374.

3. *Śakā Yajurvediya Brāhmaṇa*, by N. V. Vaidya Puresdare, Bombay, 1884. The copy of this work in my possession is a copy presented by the author to the late Rao Bahadur Gopalrao Hari Deshmukh, then at Ratlam.

4. Arabic MSS on *Rolls of paper* (about 30 metres long) coming from Moorish states and North Africa have been deposited in manuscript depositories at Barcelona (Spain). They contain diplomatic correspondence between Egypt and Aragon between A.D. 1300 and 1330. The Aragonese letters in this connection are dated A.D. 1303, 1305, 1314, 1318, 1322 and 1327. (Vide pp. 12-13 of *Egypt and Aragon* by A. S. Atiyā, D.M.C., Leipzig, 1938).

English by a Moulvi of the Elphinstone High School on 6th October 1883. This *Farmān* is described as a *Dānapatra* from Raja Bimba of Uttara Konkāṇa to Puruṣottampant Kāvāle.

From Alberuni's *Notes on the Writing of the Hindus* made about A.D. 1030 it appears that the Indians had not then adopted *paper* for writing purposes as will be seen from the following remarks¹ made by him.

(i) "The Hindus are not in the habit of writing on *hides* like the Greeks in ancient times."

(ii) "Muslims too used in the early times of Islam to write on *hides*."

(iii) Alberuni refers to *papyrus* on which the orders of the Khalifs were recorded until shortly before his time (c. A.D. 1030).

(iv) "It was in China proper that *paper* was first manufactured. Chinese prisoners² introduced the fabrication of paper into Samarkand and thereupon it was made in various places, so as to meet the existing want."

(v) "The Hindus have in the *South* of their country a slender tree like the date and cocoa-nut palms, bearing edible fruits and leaves of the length of *one yard* and as broad as three fingers one put beside the other. They call these leaves *tārī* and write on them. They bind a book of these leaves together by a cord on which they are arranged, the cord going through all the leaves by a hole in the middle of each."

(vi) "In *Central* and Northern India people use the bark of *Tūz* tree, one kind of which is used as a cover for bows. It is called *bhūrjā*. They take a piece one yard long and as broad as the out-stretched fingers of the hand, or somewhat less, and prepare it in various ways. They oil and polish it so as to make it hard and smooth, and then they write on it. The proper order of the single leaves is marked by numbers. The whole book is wrapped up in a piece of cloth and fastened between two tablets of the same size. Such a book is called *pūthī*. Their letters and whatever else they have to write they write on the bark of the *tūz* tree."

The foregoing minute study by Alberuni of the writing of the Hindus speaks for itself.

Kalhana (A.D. 1148) in his *Rājatarāṅgiṇī*³ states that a Brahmin Vijayarāja killed an unpopular minister (Citraratha) of king Jayasimha (A.D. 1128 to 1149). Vijayarāja was killed by royal troops. On his arm was found a *patrikā* or leaf with the verse of the *Bhagavadgītā* (III, 8) "परित्राणाय साधूनां विनाशाय च दुष्टकृताम् । धर्मसंस्थापनार्थाय संभवामि युधि युधि ॥"

1. Vide pp. 170-71 of Vol. I of *Alberuni's India* by E. C. Sachau, London, 1888 (Trübner).

2. Vide p. 306 of V. Smith, *Early History of India*, Oxford, 1904.

3. Vide Stein's *Rājatarāṅgiṇī*, Vol. II, 174 (Verses 2256-57. Chap. VIII).

Kalhana states that this *patrikā*, stating the cause of his action, sanctifies Vijayarājs. Possibly the *patrikā* in question was written on the *bhūrja* leaf, which was generally used in Kashmir for writing purposes.

I now close my study of the history of the migration of *paper* from China to India through varied vicissitudes of times and climes between A.D. 105-1500.¹ About six years ago I began to note down facts pertaining to this history and the visit of Mr. K. B. Joshi, the Secretary of the Paper Research Centre, (The All-India Village Industries Association), Poona to the Bhandarkar Oriental Research Institute in May 1943 hastened up my drafting of the present paper on *paper*, in which he is interested both in its technical and historical aspects. I have, therefore, to thank him most cordially for having agreed to the publication of these notes, imperfect as they necessarily are, for the benefit of the general public and scholars alike. The presentation of my data in this paper is, I am conscious, not popular but I feel convinced that I shall be doing wrong to the subject, if I keep hidden the sources of this study from the gaze of the ordinary reader. I hope that my present study will be supplemented by scholars more competent than myself to handle this subject in its varied aspects. Judging, however, by the queries I get about the introduction of paper into India and the absence of reliable material in our Encyclopaedias on the Indian aspect of this question, I have reason to believe, that my present study will clarify this problem to a certain extent, as it is put in its chronological perspective, which is absolutely essential for every historical study worth the name. If the introduction of paper into India and Europe has revolutionized modern and mediaeval civilizations, the manufacture of paper by villagers in India will not fail to revolutionize their economics, for the improvement of which The All-India Village Industries Association has been struggling since its inception some years ago. May its heroic efforts be crowned with success, is my only hope and prayer.

1. By A.D. 1500 printed books appeared in Europe. The first European printer was Gutenberg of Mainz, who printed "The Indulgence of Nicholas V" in A.D. 1454. Caxton set up his Printing Press in England at Westminster in A.D. 1477. (Vide p. 388 of Davies *History of the World*, 1937). As the Chinese were inventors of *paper*, they were also pioneers in the art of *printing*. (Vide Carter, Thomas Francis, *The Invention of Printing in China and its Spread Westward*, New York, 1931). The earliest datable *block-print* is from Japan and is dated A.D. 770, long before which the Chinese must have practised *block-printing*. The earliest Chinese *printed scroll* is dated A.D. May 868. It is a version of Buddhist *Diamond Sūtra*. (Vide p. 568 of *Smithsonian Report* 1938—Seligman's article on *The Roman Orient and the Far East*).

2. THE USE OF CLOTH FOR LETTER-WRITING AT THE COURT OF HARṢA (A.D. 606-647)*

Recently I published some papers¹ on paleography dealing with the history of paper and other writing materials used by our forefathers during the last two thousand years. A volume of correspondence has come in from the readers of these papers. Leaving aside the appreciations of the studies contained in this correspondence. I must deal with certain pertinent queries about these studies as they lead to further investigation in the fields of my study. In the present paper I propose to deal with one of such queries received from my learned friend M. M. Principal V. V. Mirashi of the Morris College, Nagpur, who wrote to me on 20-3-1944 as follows :—

"It seems quite clear from the references collected by you that paper was not in common use before the 11th century A.D. This seems to be corroborated by the comment of Viśvarūpa, a predecessor of Vijñāneśvara that "paṭe" in Yājñavalkya I, 139, excludes bhūrja-patra (paṭavacanam bhūrjanivṛtyartham); otherwise he would have said "kāgajanivṛtyartham." Of what kind was the letter carried by a messenger in his turban to Harṣa (Harṣacarita, Uchhvāsa V)? Could a bhūrjapatra have been carried like that without being broken into bits? Was paper used for the purpose? You may consider this point."

For answering the above query convincingly I have collected the following evidence from contemporary sources both literary and epigraphic :—

(1) Poet Bāṇa, the author of the Harṣacarita refers to the use of Valkala paṭṭikā² for writing purposes in the following extract from his Kādambarī :—

"Evamuktaśca mayā nikaṭavartinaḥ *tamāla*-pāḍapāpallavamā-dāya nispīḍya taṭaśilātale tena gandhagajamadasurebhiparimalena *rasena* uttariya-*valkalaikadesā*dvipāṭya *paṭṭikām* svahastakamala-kaniṣṭhikā-*nakhaśikhareṇa abhiliḥkya* iyaṁ *patrikā* tvayā tasyai kanyakāyai prac-

* M. Hiriyanṇa Comm. Volume, 1952, pp. 15-21.

1. These papers are :—(1) *Migration of Paper from China to India*, pages 205-222 of *Paper Making* by K. B. Joshi, Wardha, 1944. (2) *Studies in the Regional History of Indian Paper Industry—Paper Manufacture* in A.D. 1790 (*Bhāratīya Vidyā*, Bombay, Vol. V, pp. 87-95). (3) *Saint Rāmādās's Discourse on the Writing and Preservation of Manuscripts*, etc. (*New Indian Antiquary*, Vol. VII, pp. 126-128).

2. Q. Curtius Rufus in his History of Alexander the Great refers to the writing material used by the people of India as follows :—

"The tender side of the bark of trees received written character like paper" (vide p. 186 of *Ancient India* by J. W. M'crindle 1896). According to one view this author lived under Claudius, (A.D. 45-54).

channath ekākinyai deya itī abhidhāya arpitavān | Ityuktva ca sā tāmbula-
bhājanādākṛṣya tāmaderṣayat | Ahaṁ tu tasyāḥ karatalādādāya valkala-
paṭṭikāṁ imāṁ śryāṁ abhilihitāṁ apaśyam.

dūraṁ muktālatayā bisasitayā vipralobhyamāno me |
hathas iva darśitāḥo mānasajanmā tvayā nītaḥ |”

The foregoing extract gives us the use of valkalapaṭṭikā or a strip of bark-garment for writing romantic letters with the aid of finger-nails but we cannot conclude therefrom that this method was normally current in Bāṇa's time i.e. 7th century A.D. It appears that cotton cloth as material for writing upon was in use in India before the Christian Era and its use was continued to very late times. My friend Dr. S. M. Katre has referred to this fact in his book on *Indian Textual Criticism*¹ published sometime ago. We must, however, record specific contemporary evidence to prove the use of cotton cloth for writing purposes in Harṣa's time (7th century A.D.) with a view to answering Principal Mirashi's query referred to above.

(2) The Chinese invented paper as early as A.D. 105 but in spite of the Sino-Indian contact which increased in subsequent centuries Indians don't appear to have adopted the use of *paper* for writing purposes. I-tsing, the Chinese traveller in India, had to order *paper* and *cakes of ink* for writing Sanskrit MSS from China (A.D. 671).² At present no Sanskrit lexicon is found to contain any Sanskrit word for paper though paper was known in India in the 7th century A.D. In two Sanskrit-Chinese lexicons of the 8th century A.D. edited by Dr. P. C. Bagchi, we find a Sanskrit word *śayāḥ*: recorded as equivalent for paper

1. Vide p. 5 of *Indian Textual Criticism* (Karnatak Publishing House, Bombay, 1941) —“Cotton cloth mentioned by Nearchos is also referred to by some metrical *Smṛitis* and several inscriptions of the Śātavāhana period, as material on which official and private documents were written and which is called *paṣa*, *p śikā* or *Kārpāśika paṣa*. According to Burnell and Rice, Kanarese traders still use a kind of cloth called *Kaṣṭatam* which is covered with a paste of tamarind seed and afterwards blackened with charcoal. The letters are written with chalk or steel-pen pencil and the writing is white or black.” “Peterson discovered a MS written on cloth dated *Vikrama Samvat* 1418 (= A.D. 1351-52).”

Alberuni (c. A.D. 1030) speaking of writing material used by Hindu children states —

Page 182 of *Alberuni's India* (Sachau, London, 1888)—“They (Hindus) use *black tablets* for the children in the schools and write upon them along the long side, not the broad side, writing with a white material from the left to the right. One would think that the author of the following verses had meant the Hindus:—

“How many a writer uses *paper* as black as charcoal

Whilst his pen writes on it with white colour

By writing he places a bright day in a dark night;

Weaving like a weaver, but without adding a woof.”

They write the title of the book at the end of it, not at the beginning.”

2. Vide p. 210 of my paper on *Migration of Paper from China to India*.

but in spite of this record the Indian languages⁸ as also Sanskrit ignored the word and consequently it was permanently lost to India.¹

(3) In the Sanskrit Buddhist work *Āryamañjuśrīmūlakalpa* which belongs to about the 2nd century A.D. according to Dr. Benoytosh Bhattacharya there is a section called "paṭavidhānapaṭala" in which the use of paṭa or piece of cloth for writing or painting purposes is clearly indicated by the expressions "taṃ paṭam likhāpayet" and "taṃ paṭam citrāpayet" with reference to the painting of the Buddhist god Āryamañjuśrī on a paṭa.²

(4) Recently Dr. Hiranand Sastri, Director of Archaeology, Baroda, delivered some lectures on "*Archæology and Ancient Indian History*" (Published at Ahmedabad, 1944). In his lecture on "*Nālanda*" Dr. Sastri describes some seals found at Nālanda and states that *no document has yet been found at Nālanda* with any of these seals to show how they were fastened. He then quotes a passage from Bāṇa's *Harṣacarita* (Trans. by Thomas and Cowell, pp. 40-41) to prove that such seals or tokens were tied to letters by means of a thick and strong *Sūtra* or string. This passage describes the lekhaḥāra or curator from Kṛṣṇa, the brother of Śrī Harṣa as follows:—"atha tenānyamānam.....atinibiḍa-sūtrabandhanimittāntārālakṛtavayavacchedayā lekhamālikayā parikalitamūrdhānam.....praviśantam lekhaḥārakam adrākṣīt". (Then he beheld the messenger entering as he was brought before him—his legs tired and heavy with the long journey, with his tunic girt up rightly by a mud-stained strip of cloth, the knot hanging loose and fastened up by a rugged clout swinging behind him and having his head wrapped with a bundle of letters, which had a deep division pressed into it by a very thick thread that bound it.....").

1. I am indebted to my esteemed friend Dr. Sunitikumar Chatterji of the Calcutta University for this information. I reproduce Dr. Chatterji's remarks on my paper as communicated by him in his letter dated 22-6-1944:—

"After receiving your notable monograph on *Paper in India*, I wanted to write to you to draw your attention to a *very early reference to Paper in India found from Chinese sources*. In Dr. Prabodh Chandra Bagchi's Edition of two Sanskrit-Chinese lexicons of the 8th century A.D. a Sanskrit word *ṣayā* is given as the equivalent of the Chinese for 'paper'. 'His *ṣayā* is evidently an Indianisation of the Chinese word itself, which is pronounced in modern times as *che* (ca), but an older pronunciation was *ṣie*. Evidently it was current in Sanskrit and in other Indian languages and that is why it found a place in the Sanskrit-Chinese lexicon; but Indian scholars somehow ignored the word, and it became later on lost to India. The word *Kāghaz* also occurs in the Sanskrit-Chinese lexicons as *Kakali*, *Kakari*, and the late M. M. Haraprasad Sastri noted a very old form in Nepal, *Kāyagala*, as a Sanskritization of a foreign word."

Many scholars in this country are ignorant of the Sino-Indian sources of Indian history. We, therefore, welcome with a joyous heart Dr. P. C. Bagchi's Quarterly Journal of *Sino-Indian Studies* now started at Calcutta and wish it a successful career.

2. Vide pp. 75-76 of *Āryamañjuśrīmūlakalpa* (G. O. S., Baroda).

Dr. Sastri further observes :—"Such seals as were found in their entirety like the one of *Paṣupatiśimha*, were probably fastened to strings, whose ends were secured on the documents themselves, either by being sealed with the same seal, or by another seal or token. The string might have been of *hemp* or *cotton*. In the absence of any specimen it cannot be determined whether these documents were written on wood, leather, palm-leaves, paper or any other material."

Speaking of the material for sealing used in those days, Dr. Sastri observes :—"For the sealing wax of to-day clay was probably used in those days. A piece of *white Khādi* was found in the hole of one seal."

It will be seen from the above remarks that even an archaeologist like Dr. Sastri is unable to determine the nature of the material used for writing at Nālanda in the 7th century A.D. or thereabout. Possibly the piece of *Khādi* found in the whole of one seal is a relic of such material as will be seen from the evidence I shall record in the following lines.

(5) Nearchos was the admiral of Alexander's fleet during his Indian expedition. Strabo, the Greek geographer (B.C. 64 to A.D. 24) writes on the authority of Nearchos that the Indians wrote upon cloth, which was well pressed to make it smooth.² This evidence clearly shows that the practice of writing letters on cloth was in vogue in India 900 years, if not more, before Harṣa's time and even King Harṣa, followed it himself in his official correspondence as will be seen from the following extract from the *Life of Hiuen-Tsiang* (A.D. 629-645) by his pupil *Hwui Li* (Trübner 1911, p. 190) :—

"Three days after separation the King (Śilāditya or Harṣa) in company with Kumāra-rāja and Dhruvabhaṭṭarāja, took several hundred light horsemen and again came to accompany him (*Hiuen-Tsiang*) for a time and to take final leave, so kindly disposed were the kings to the Master. Then he commissioned four *Ta-kwan* (*official guides*) to accompany the escort: they call such officers *Mo-ho-ta-lo* (*Mahātāras*?). The King also wrote some letters on fine white cotton stuff and sealed them with red wax (or composition), which he ordered the *Ta-kwan* officers to present in all the countries through which they conducted the Master, to the end that the princes of these countries might provide carriages or modes of conveyance to escort the Master even to the borders of China."³

The foregoing extract clearly shows that in the 7th century A.D. the use of "*fine white cotton stuff*"³ for writing official letters was in com-

1. Vide pp. 79-80 of *Archaeology and Ancient Indian History* (4 lectures) by Dr. H. Sastri, Pub. by Gujarat Vernacular Society, Ahmedabad, 1944.

2. Vide p. 186 of *Ancient India* by M'Crindle (1896).

3. I may note here a curious use of cloth referred to by Ahobala in his *Mīmāṃsā* work *Vākyaśikṣasāra* with his own commentary (Vide p. 51 of Ed. by R. R. Sastri in *Mysore Sanskrit Series*, 1943). In some province there appears to have been current

mon use and that these letters were sealed with *red composition* which was possibly some kind of clay as Dr. Sastri has stated after examining a number of Nālanda seals.

(6) I am now in a position to consider Principal Mirashi's query about the material of which was made the letter sent to Harṣa containing the bad news of his father's illness. The passage from the *Harṣa Carita* (5th Uchchvāsa) which refers to this letter reads as follows:—
 "atha dūrādeva ca lekḥagarbhayā n||irāgamecakarucā cailacirīkayā racita-
 muṇḍamālikam.....adhvagam kuraṅganāmānamāyāntamadrākṣīt." (Vide p. 133 of Eng. trans. of *Harṣa Carita* by Cowell and Thomas, London, 1929—"Anon he (Harṣa) beheld afar off a certain Kuraṅgaka approaching with a *billet* tied in a forehead-wrap of rag^s of deep indigo hue", etc.)

If Harṣa got his letters written on "*fine white cotton stuff*" as stated in the *Life of Hiuen-Tsiang*, it is reasonable to infer that the above letter brought to Harṣa by a messenger wrapped up in his turban must have been written on a piece of *cloth* and consequently there was no danger of its being broken into bits. I hope the evidence recorded above warrants us to draw this inference.

(7) The above inference has been further supported by inscriptional evidence of c. A.D. 700. Mr. Priyatosh Banerjee in his article in *Jour. of Bihar and Orissa Research Society*, June, 1944, pp. 198-202, on "Patna Museum Inscription dated in the year 17 of the reign of Viṣṇugupta (c. A.D. 700)" translates the last portion of this inscription as follows:—"*The short cloth of the deed of purchase was written on by Devadatta and was inscribed by the wise artisan Kulāditya*" ("likhitā devadattena saṃkṣiptā kraya-cirīkā | utkirṇā sūtradhāreṇa kulādityena dhīmatā ||").

Mr. Banerjee adds:—"*This is my translation of krayacirīkā. Cloth as writing material was very common in ancient times. See Chapter VIII, para XXXVII, B-Ind. Antī. Vol. XXIII, 1904 (Appendix)*."—
 The above inscription is on a *stone* piece (1 ft. 3 inches x 9 inches). Evidently the deed was drafted on a piece of cloth (*cirīkā*) and then inscribed on a stone. I believe in the light of the above evidence that the letter brought to King Harṣa by a messenger must have been written on a *cirīkā* and inserted in the *cailacirīkā* of his turban.

.....
 the custom of communicating the good news of the birth of a son to his father by sending with a messenger a *pata* or piece of cloth with the footprint of the newly born son as will be seen from the following extract:—

"kvaciddēśe sutopattau pajam sutapadāṅkitam |
 preṣayanti janā vārtāhāreṇa janakāntikam || 72 ||

kaśmīrīciddēśe putrajanaśamanantarān alaktādīnā putrapadāṅkitam pajam tatpitre
 kuṃārajanasādcānārtham kenacidvārtāhāreṇa śvātūrādayah preṣayanti | sa ca vārtāhārah
 tam pajam gṛhītvā jaṅkābhyāśam prāpya prātarasmai putrapadāṅkitam pajam pradāryā
 dāṭṭyā vārdhase putreśto jātāh iti vadati | etc."

I shall feel thankful if any scholar reports to me any additional references to this custom from literature. Is this custom now current in any part of the world?

3. STUDIES IN THE REGIONAL HISTORY OF INDIAN PAPER INDUSTRY

The Paper Manufacture at Harihar on the Bank of the Tungabhadra in
A.D. 1790 as described by Capt. Edward Moor.*

In my recent paper¹ on the *Migration of Paper from China to India*, A.D. 105 to 1500, I referred to the question² of reconstructing the history of Indian paper industry since the introduction of paper into India c. A.D. 1000. In this connection I quoted the reference of Mahaua, the Chinese interpreter who visited Bengal in A.D. 1406 to the effect that the people of Bengal manufactured paper³ from the *bark of a tree* and that the paper so manufactured was smooth and glossy like a deer's skin. The manuscripts libraries in India are full of thousands of MSS⁴ on paper, mostly indigenous, manufacture of this indigenous paper belonging to different dates and places. Such a history cannot be reconstructed in a short time as it pertains to different centres of paper industry current in different periods of time. I propose, therefore, to record in the form of occasional historical notes on this subject such data as I can gather during the course of my other studies pertaining to the history of Indian Culture in its varied aspects. It is hoped that such data will materially facilitate a systematic reconstruction of the history of indigenous paper industry in India say between A.D. 1000 and 1850 and thus clarify our nebulous knowledge of this industry current at present. In dealing with the history of Indian paper industry⁵ between

* *Bharatiya Vidya*, Vol. V, pp. 87-95.

1. Vide pp. 205-222 of *Paper Making* by K. B. Joshi, All-India Village Industries Association, Meganwadi, Wardha (C. P.), 1944.

2. *Ibid*, p. 216.

3. Cf. the use of palm-leaf in the Vijayanagar empire *Third Dynasty* (A.D. 1529 to 1543) by N. V. Ramanayya, Madras, 1935, p. 197. "The measurement of lands and several details pertaining to it were entered in palm-leaf registers called *Kavilas*. Each village had a *Kavila* of its own which was maintained by the *Karnam* or the village accountant." "Copies of village *Kavilas* were preserved in the *Cavadies* or offices of the *Sahas* or *Sims*. Probably copies were also kept in the *Ajhaanam* or the imperial revenue Secretariat."

4. These MSS are evidently the product of old paper-making processes described on pp. 6-8 of *Paper-Making* by K. B. Joshi. We need, however, some historical testimony about these processes as current in different parts of India at different periods.

5. K. B. Joshi (p. 3 of *Paper-Making*, 1944) observes:—"The history of paper-making and its spread in this country still remains in shrouded mystery although during the Moghul and the Peshwa period it flourished throughout the whole country." "The industry flourished most in the Punjab. Sialkot produced paper worth 9 lacs in Jahangir's time. Paper was produced at Multan, Rawalpindi, Jalalpur-pirwala, Delhi, Lahore, etc. (See Gee's *Monographs on Fibrous Manufactures of the Punjab*). During the British period paper-making was introduced in Provincial Jails. Joshi then gives a list of places in the U. P., C. P. and Bombay provinces, etc. noted for paper-manufacture. He also refers to the Nepal paper-manufacture and the art of paper-making as practised by Muslim *Kagazis* under the patronage of the Moghul Emperors.

c. A.D. 1000 and 1800 we are of course concerned with hand-made paper. Even in Europe "until the close of the eighteenth century paper-making was mainly a hand-process, at least so far as the actual formation of the sheets was concerned." The method¹ of preparing paper introduced and employed in Europe up to the invention of the stamping mill in A.D. 1151 at Xàtiva, (an ancient city in Valencia), Spain, were as follows: "In the early days of printing, when Gutenberg, Fust and Schoeffer and later Tenson and Caxton practised, the hollander or beating engine was unknown to paper-makers. Rags were reduced to pulp in very elementary fashion. At the invention of paper-making the following was the method adopted. The material was gathered together and allowed to ferment, then boiled in wood ashes and put into bags which were immersed for a considerable period in a running stream. Having thus removed the alkaline residue, and a large proportion of the dirt, the mass was beaten 2 or 3 lbs. at a time on the wooden blocks, with heavy sticks. By this process the material was gradually reduced to a pasty pulp, which was diluted with water to the required consistency. Sheets were formed by immersing in the pulp a rectangular sieve, with meshes formed of strips of bamboo or similar material connected together by silk threads. The pulp was contained in a vat and was constantly stirred during the making of the sheets. Sufficient fibre to form a sheet was picked up on the sieve and the drying of the sheets was afterwards performed by exposure to sun and air."

These methods current in Europe before A.D. 1151 may now be compared with the method of preparing paper as current in the Maratha country and recorded with some detail by Captain Edward Moor² about A.D. 1790. Moor was one of the founders of the Royal Asiatic Society, London, and an acute observer of Maratha life and customs as will be seen from all his writings and especially his account of the British co-operation with Parashuram Bhaui Patwardhan, the celebrated Sardar of the Peshwa in the siege of Dharwar (A.D. 1790-91) against Tipoo Sultan. Moor in his account of the places visited by him describes

1. Vide p. 8 of *Paper (its History, Sources and Manufacture)* by H. A. Madox, London, Sir Isaac Pitman and Sons, Ltd. (1933). In 1794 Nicolas Louis Robert invented a machine for making paper in lengths of 12 to 15 metres.

2. *Ibid.*, p. 10.

3. *A narrative of the operations of Captain Little's Detachment and of the Maratha Army commanded by Purseram Bhow; during the late confederacy in India against Nizam Tipoo Sultan Bahadur* by Edward Moor, Lieutenant on the Bombay Establishment, London, 1794—Chap. V (pp. 97-113). "The armies arrive in the neighbourhood of Bangalore, and separate until the return of the fair season enables them again to cooperate. Transactions of the Bhow's army, etc. between Bangalore and Chitaldroog, March of a party of sick and Wounded to Murray Hal by the route of Reidroog, Harpoonelly and Ouchingadroog with some account of these places."

Haribar' as follows:— P. 110 "The name of this place is generally written *Hurry Hur* sometimes *Harea Har Ghur*, but from having been so often, and so long a time here, we will venture to affirm our method of spelling it to be preferred: we have, we allow, heard it, by the inhabitants called *Hurry Hur*; but nine in ten, indeed all the intelligent people, authorise us in deviating from the common mode. As this fort and town is situated hard by a principal pass over the river, that by the treaty of peace is become the *dividing boundary of the Mahratta and Mysorean empires*, it is likely to be a post of great importance to the latter as their northern frontier, and deserves therefore, particular notice, as well as of its future probable improvements, as of its present state.

Hurry Hal is most delightfully situated on the eastern bank of the Toombudra, which river in the rain washes the western wall of the fort, it is at present a pretty little fortification of no considerable strength against our operations but if garrisoned by our troops, capable of a good defence."

Moor then makes his observations on the trade and industries of Harihar as follows:—

"Hurry Hal in itself is a place of no great trade; they manufacture their common cloths but import the silk dresses and other finery for the ladies; grain is furnished by its lands in quantities more than sufficient for the inhabitants and in peaceable times a little is sold, *the only article they manufacture for sale, is paper*, of which they send some but in no considerable quantity to other markets. The paper made here is of a very inferior kind but we apprehend they could make finer were it in demand: the process^a of making it is in the same style of simplicity

1. Vide p. 806 of *Indian Companion* by G. H. Khandekar, Poona, 1894— "Harihar Town and Railway station situated on the right bank of the Tungabhadra river 48 miles from Chitaldurg. Population about 5000. Harihar is a compound of Hari (Vishnu) and Hara (Siva). According to a legend the god and goddess united in one form to destroy a giant who won from Brahma the gift of perpetual life and used it for the torment of gods and men. Harihar is an ancient town, and has yielded many inscriptions some of them dating back to the 13th century. The chief temple now existing was erected in 1223. Post Office."

2. Cf. the following inventions and improvements in the making of paper that took place in Europe in the 18th and 19th centuries (vide pp. 13-14 of *Maddox Paper*):—

- Between A.D. 1690-1720—Hollander or beating engine (invented by the Dutch).
- A.D. 1774 — Discovery of chlorine by Scheele.
- A.D. 1785 — Discovery of bleaching action of *Chlorine gas* by Berthelot (Frenchman).
- A.D. 1791 — Discovery of bleaching action of Soda ash by Leblanc.
- A.D. 1800 — Introduction of bleaching powder by Tennant of Glasgow.
- A.D. 1807 — *Morris Illig* (German) introduced resin for sizing of paper pulp.
- A.D. 1821 — Strainers used on the paper making machine.
- A.D. 1840 — Wood-pulp introduced by G. Keller (German).
- A.D. 1860 — *Rouledge* discovered esparto grass as paper-making material.

that we before mentioned being so observable in eastern artists : a shallow well of eight feet diameter is sunk, we will say four feet and chunamed ; in the middle is inserted a block of hard wood ; a heavy hammer or wooden beater is placed on the side of the well nearly equipoised so that a man standing on its centre by lifting either leg moves it up and down ; its head falling on the wooden block, beats the materials of which the paper is made to a pulp ; a second man remains in the well to keep the materials to be beaten in its proper place. Old cloths, old tents and such things are easiest to work, but when they cannot be procured, *the bark of particular shrubs* is substituted being first as well as cloths, well washed and soaked in water for several days. When sufficiently beaten, the pulp is mixed with a little quantity of water in chunamed reservoirs, into which the workmen dip their moulds and the mixture adhering to them when lifted out, instantly becomes paper ; other persons remove it, and draw each sheet through a second piece of water, and hang it up to dry. A quantity of gum Arabic is dissolved in the water into which the beaten pulp is put ; and that through which the paper is drawn is also a mucilage of that gum with a portion of alum dissolved in it. The moulds or forms of the workmen are made of thin shreds of bamboe. The tree from which the gum called *gum Arabic* exudes grows in abundance in every part of the upper country between Seringapatam and Poona : it was known to us by the name of *babool tree*." 1

1. I note here some dates of the inventions associated with the *evolution of paper-making* and allied matters as recorded by Maddox in his book on *paper* :—

- A.D. 795— Paper mills established at Bagdad, p. 4.
- A.D. 11th century— Moors introduced paper into Europe— *Toledo* (Spain) received the art first. Then it spread to Italy, France and Netherlands.
- Between A.D. 13th and 14th centuries— Art of *water-marking* invented in Italy. This factor greatly added to popularity and interest in paper. It also aided accuracy of historical research in succeeding ages.
- A.D. 1336 — First paper mill erected in Germany (p. 5).
- A.D. 1496— Mention of earliest paper mill in England in the Colophon of a work printed at Westminster (p. 6).
- A.D. 1498— John Tate (the younger) erected a paper mill at Stevanage (Hertford)— Tate's papers were *watermarked* with a five pointed star.
- C. A.D. 1548— Attempt of *Rémy* (a foreigner) to introduce paper-making in Cambridgeshire.
- A.D. 1588— Spielman erected a Mill at Dartford in Kent with a ten years' licence from Queen Elizabeth. This mill produced coarse paper, not white.
- C. A.D. 1641— Patent for the invention and manufacture of *white paper* granted to four Englishmen (p. 7).
- A.D. 1665— First British patent to *Hildegard* for the manufacture of *blue sugar paper* from A.D. 1678; paper-making firmly established in England.
- A.D. 1685— Influx of Huguenot refugees (highly skilled paper-makers) into England—John Briscoe took out an English patent for *the true art for making as good paper as French or Dutch*.

The foregoing description of paper-manufacture at Harihar by a scholar-soldier about A. D. 1790, though late, has great importance for the regional history of indigenous paper manufacture in India between c. A.D. 1000 and A.D. 1850 or so. The method of preparing paper as current at Harihar 150 years ago was simple enough and took no count of the stamping mill invented in Europe in A. D. 1151 and the Hollander's (or beating engine) invented by the Dutch between A.D. 1690 and 1720. The hollander gradually superseded the stamping mill as it had the capacity to reduce the toughest material to a state of pulp in a few hours.

Side by side with historical descriptions of regional paper-manufacture in India it is worth while undertaking a chemical and microscopic study of the material used for the numerous *dated* MSS¹ (written on paper). Such a study may furnish definite tests regarding the materials used for paper-manufacture in different parts of India at definite dates recorded in these MSS. These tests are also likely to be useful for determining the dates of undated MSS in the manner of the *water-marks* introduced into European paper manufacture after the 13th century. The value of these *water-marks* for determining the age of a paper manuscript or document has been now recognised by historical research students of Europe. Unfortunately the paper MSS in India, with the exception of those written very late in the 18th or 19th centuries on foreign paper, contain no water-marks. We must, therefore, devise some tests on the strength of dated MSS before us, which can enable us to determine the age of undated MSS manufactured at a particular paper centre at a particular period of history.

A. D. 1740.—*Whatman* of Maidstone (Kent) built a mill for manufacturing high quality papers. *Whatman* learnt the art in Holland. *William Balfour* succeeded him 1793.

A. D. 1690.—*First American paper mill* commenced at Foxborough (Philadelphia) by *William Rittenhouse* (p. 8).

The foregoing chronology will give the reader a clear idea regarding the progress of the art of paper-making in Europe prior to A. D. 1790 when Capt. Edward Moor saw paper manufacture at Harihar in the Mahratta country and described it in his book published in London in A. D. 1794.

1. Vide p. 13 of *Paper* by Maddox.—“The hollander consisted of an oval-shaped wooden trough with a division running lengthways along the centre. At one side was fixed a wooden revolving cylinder fitted with steel knives which worked against a bed plate also containing knives.”

2. There are hundreds of dated paper MSS in different libraries in India and outside. The copies of some of these MSS record at times the places where these copies were made but these places cannot give us a clue to the centres of paper-manufacture then current, as paper may have been transported from one centre to many places far away from the place of its manufacture. It is, therefore, our business to study the history of each paper centre separately as disclosed by provincial and other sources and then see for ourselves how the needs of the learned men and governments of the different States in India were met by the several paper manufacturers of different periods.

Baber, in his memoirs, states that the best paper in the world in his time came from Samarkand. The paper used for state records during his reign may possibly have been imported from Samarkand. With the expansion and growth of the Mughal Empire during the reigns of Humayun and Akbar indigenous paper manufacture may have been started to meet the growing demands of the state departments. Though Akbar "had not taken the trouble to read" he was a great lover of books like his ancestors. All the books collected by him were manuscripts as he cared nothing for printed volumes and got rid of the choice specimens presented to him by the first Jesuit mission. In October 1605 an inventory of his books preserved in the fort of Agra was taken and it showed 24,000 volumes "adorned with extremely valuable bindings valued at Rs. 6,463,731." In this account¹ of the imperial library given by Vincent Smith no mention is made of the paper used for the volumes in this library but we have reason to believe that some of these volumes may have been written on indigenous paper. The record office² organised by Akbar and a relic of which exists in the form of the record-room at Fathpoor-sikri may have contained many records on indigenous paper, an exhaustive history of which needs to be investigated and recorded by some Persian scholars, if such a work has not already been done. What concerns me in the present study is the history of the centres of paper-manufacture in India which produced during the last 600 years or so varieties of hand-made paper now represented by thousands of paper MSS in our MSS libraries.

These paper MSS old and young, musty or white, yellowish or bluish, thin or stout, rough or smooth, have preserved our ancient learning intact to the best of their strength and durability, which laughs at the pages of some of our printed volumes which have grown brittle at an early age of 50 to 60 years, while their ancestors are still strong and stout even after the lapse of 600 years. We await a categorical and convincing reply to this question from all concerned.

1. Vide p. 424 of *Akbar the Great Moghul* (1542-1605) by V. A. Smith, Oxford, 1917.

2. Cf. the Vijayanagar practice of inscribing every thing of permanent public interest on stones and copper-plates. The person in charge of inscriptions was called *Sāntācārya* and the actual engraver was called the *Silpi* or the *Sculptor* (p. 273 of Vol. I of *Salatore's Vijayanagar Empire*, 1934).

4. THE REGIONAL HISTORY OF INDIAN PAPER INDUSTRY

(Paper-manufacture at Behar and Arwal in A.D. 1811-1812 as described by Francis Buchanan)*

As a result of my recent studies¹ in Indian Paleography I have been led to study the history of different centres of Indian paper industry, which is responsible for the large number of paper MSS that has survived the ravages of time and vandalism² since the introduction of paper into India c. A.D. 1000. As the history of these centres of indigenous paper manufacture is shrouded in obscurity, I have thought it advisable to put on record whatever facts I can gather about this history during the course of my other studies. Accordingly I published a contemporary account³ of the Paper-Manufacture at Harihar on the bank of Tungabhadra as given by Capt. Edward Moor about A.D. 1790. In the present paper I shall record a more detailed history of paper-manufacture at different centres in Behar as recorded in A.D. 1811-12 by Francis Buchanan.

In his *Account of the Districts of Behar and Patna* in A.D. 1811-1812 (Book V) Buchanan has recorded a minute account of the State of Arts and Commerce of these districts. In Chap. II of Book V he speaks of *Common Artists* who live by making ink and paper⁴ as follows:—

* *Bhāratīya Vidyā*, Vol. VI, No. 6, pp. 126-30.

1. These studies are:—

(1) "Migration of Paper from China to India" (vide pp. 205-222 of *Paper-making*, by K. B. Joshi, (Wardha C. P.) 1944.

(2) "Saint Rāmedās's Discourse on the Writing and Preservation of MSS and its importance for the History of Indian Paleography", (*New Indian Antiquary*, Vol. VII).

(3) "Use of cloth for Letter-writing at the Court of Harāḥ (A.D. 606-647), *Hiriyāna Commemorative Volume*).

2. Vide pp. 335-336 of Bernier's *Travels* (Constable, London, 1891). Bernier's patron Danishmand Khān could not purchase a MS of the Vedas because "The Gentiles indeed conceal them with much care, lest they should fall into the hands of the *Mahomedans*, and be burnt, as frequently has happened."

3. Vide pp. 87-95 of *Bhāratīya Vidyā*, Bombay, 1944, Vol. V.

4. *Patna-Gaya Report*, by F. Buchanan, Vol. II, published by the Bihar and Orissa Research Society, Patna. In 1807 the Directors of the East India Co. recommended to the Governor-General that a statistical survey of Bengal should be carried out and that Dr. Francis Buchanan, who had already carried out the survey of Mysore should be appointed for this purpose. Buchanan accordingly carried out the survey and submitted his reports as per directions of the Governor-General.

5. *Ibid*, p. 689—Speaking of persons by whom commerce is conducted, Buchanan observes:—

"Paper in most small towns is sold by the *Passaris*, or druggists, or by the *Khichri-furakh*, who deal in *Passari* goods; but in Patna some shop-keepers (*Kaguzi*) sell nothing else except *blank books for keeping accounts*. Some of them purchase the paper rough and have it smoothed by the *Mohurshdar*. Their Capitals are from 50 to 150 *Rs.* Some persons of the *Kayastha* tribe hawk about the streets the books in the profane language that are most commonly read. Two Brahmans in Patna hawk *almanacs made at Benares*."

Page 622 — Ink-manufacture.

"A few people live by making ink which is kept both in a liquid and solid form. 95 S. W. of *linseed* oil give 4 S. W. of *lamp black* collected by an earthen lamp. Take 4 S. W. of lamp black, 5 S. W. of *gum* of the *Mimosa Indica*, add a little water, and rub in an iron mortar with a wooden pestle for three hours. Then infuse $\frac{1}{2}$ S. W. of *gall nuts* in 10 S. W. of water and add the strained infusion to the rubbed materials. Then rub again for 3 hours, then put the pot into the sun, until the paste dries sufficiently to admit of its being made into small lumps, which are dried in the sun. These do not spoil by keeping a considerable time."

Page 623 — "A considerable quantity of paper¹ is made at Behar and Arwal. It is whiter than that made at Ronggopur: but has all its other imperfections, and that of Behar especially is less durable, while the least dampness in the air occasions common ink to sink, so as to form almost illegible blots. It is only ink² made of the cakes prepared as above mentioned, that can be used with such paper. At Behar the paper most commonly made is that called *Dufturi*, which is 19 x 17 $\frac{1}{2}$ inches a sheet, and is that used in common business, but other kinds of a large size, and rather superior quality are made, when commissioned. The material is *old bags* of the *Crotolaria juncea*. These are cut into small pieces, and, having been soaked in water, are beaten with the instrument called the *Dhenki*. The pulp is then put on a cloth strainer, washed with water, and dried on a rock. This substance is then put into a cistern with some lcy of *soda*, and is trodden with the feet for some hours after which it is in the same manner washed and dried and these operations with the *soda* are in all performed six times. The bleached pulp is then put into a cistern with a large quantity of water when it is wrought off into sheets as usual. The moist sheets are stuck flour and water, they are then smoothed by placing them on a plank and rubbing them with stone.

1. A *quire of paper* was sent from Surat to Broach on 23rd December 1614 by Elkington to Orwick (vide p. 46 of *Supplementary Calendar of India Office Documents* (1640-1640), by W. Foster, London, 1928. Possibly this paper was not of Indian manufacture.

2. Saint Rāmadēsa of Mahārāṣṭra (c. A.D. 1650) in his *Lekhano-nirūpana* (*Dāsabodhā*, Dalaka 19, Samāsa 1) refers to ink made from lamp-black. I-tsing (A.D. 671) at Nalanda, Kashmir MSS Report (1887) p. 30, refers to ink for writing Sanskrit MSS. Bühler in his *almonds* converted into charcoal. This charcoal was then boiled with *gomātra*. This ink becomes water-proof.

The expense and profits of making *seven* reams are as follows :—

Forty-two sers (86½ lbs.) of *old bags*, 2 Rs.; 42 sers impure *soda*, 2 Rs.; 42 sers *lime* for making the ley 1 Re.; *labourers* for beating with the Dhenki, 1 Re. 12 annas; a *man* to stir about the materials, 8 annas; *paste* and *smoothing* the paper with a stone, 5 annas; *flour* and *firewood* for making the *paste*, 2 annas, 6 pice; *drying* the sheets, 4 annas; *cutting* the paper, 6 pice — Total 7 Rupees.

The *guddi* or ream consists of 10 quires (*destahs*) each containing 23 sheets, and sells by whole at 8½ Rs. so that the maker has 1½ Rs. profit. He does nothing but form the sheets, taking them as usual from the cistern on a frame, which retains the paper and allows the water to escape. He makes about *one ream* a day; and if he works 315 days in the year, he will earn about 80 Rs. a year; and in fact, these people are in easy circumstances. In the 30 houses at Behar are 100 men, and in the 13 divisions exclusive of Arwal, that are in the district, there are probably 40 houses, or in all 140 men, who, at the rate above-mentioned will make paper to the value of 32,000 Rs. a year.

At Arwal 20 families keep an equal number of beaters (*dhenkis*) and the estimate, which I procured depends on the work performed by each of these. On the opposite side of the Son river, however, in Shahabad are 50 beaters and the whole produce of these is sold as *Arwal paper*, which although made of the same materials is *whiter* and *more durable* than that made at Behar and is commonly *used by Persian writers all over Bengal*. Each beater usually makes five bales in the year; and each bale contains 20 reams. Two bales of the first quality at 4 Rs. a ream, 160 Rs.; 2 bales of the second quality at 3½ Rs. a ream, 140 Rs.; 1 bale of the third quality at 2½ Rs. a ream, 50 Rs.—*Total 350 Rupees*.

The total paper, therefore, made by 20 beaters will be worth 7000 Rs. The following is the statement, that I procured, of the *annual expense* attending *each beater* :—

To 2620 sers (46 S. W.) or about 3,069 lbs. of *old bags* or *nets*, which are still better, 57 Rs. 8 annas; to *soda* 2,340 sers, or 2,762 lbs., 45 Rs.; to *lime* the same quantity, 30 Rs.; to *flour* for paste, 5 Rs.; to *cloth* for strainers, baskets, etc. 2 Rs.; to *moulds*, or *frames*, 1 Re. 3 annas; to *labourers* for beating, etc. 80 Rs.; to working off the *sheets*, 25 Rs.; to *drying* and *smoothing*, 7 Rs. 15 annas, 6 pice; to *paste* 5 Rs.; to *cutting* and *packing* 15 R. — Total 286 Rs., 6 annas, 6 pice.

The net *profit*, therefore, on each beater, besides paying every person for his labour is 73 Rs. 6 annas, 6 pice. The materials are divided into five equal shares, each capable of making one bale. Under the beater of the implement is a small *cistern*, the bottom of which is

stone. In this is at once put the fifth part of the old *bags* or *nets* with a large quantity of water and it is *beaten for six days*, after which it is washed on a *strainer*. It is then beaten two days with a ley of *soda*, washed and dried. This beating with the ley of soda is done in all nine times, after each of which the *pulp* is washed and dried. In dry cold weather each subsequent beating occupies eight or ten days, in the hot season five or six days are sufficient. The paste when thoroughly bleached, is formed into sheets as usual. All the sheets formed in one way are in the evening placed under a plank on which two or three men sit for about an hour to squeeze out the water. It is then stuck on a wall, and falls off next morning when dry. It is then pasted on one side and dried, and then it is pasted on the other side and dried, rubbed with a stone, and cut square. All the *paper-makers* here also are *Muhammedans*.¹ The *Mohurahdars* are persons, who smooth paper by rubbing it with polished glass, which obliterates entirely the marks of the frame, as is done by hot pressing, and gives the surface a glossy smoothness. This operation costs from eight to ten annas a ream, and the workmen must make very handsome wages.

Although many great idle fellows amuse themselves with *paper-kites*, the makers cannot live the whole year by this profession as few amuse themselves with this sport except in the cool season. The makers, therefore, retail toys for children, which are made by the potters, and the apparatus used in smoking tobacco. Their kites (*telanggi* or *guddi*, are not superior to those of Puraniya."

In Table 40, p. 767 Buchanan gives us a List of Artists in the city of Patna and the district of Behar. In this table the number of artists engaged in paper-manufacture is as follows :—

<i>Division or Thanah</i>	<i>Paper-maker</i>	<i>Mohurradar</i>	<i>Guddi-maker</i>
Patna City	3	13	14
Bakipur-Jaywar	5	...	...
Behar	30	...	25
Jahanabad	2	...	...
Daudnagar	4	...	...
Arwal	20	...	...
Gaya	...	...	17
Bar	...	...	1
	Total	64	13
			57

1. On pp. 311-312 of Vol. I of *Patna-Gaya Report* Buchanan records a list of Muhammedan tradesmen of 38 tribes. In this list we find *Paper-makers, 110 families*.

The foregoing economic and industrial survey¹ by Francis Buchanan of the *paper-manufacture current* in Behar and Patna in A.D. 1811-12 is, I believe, an ideal one for any history of regional paper-manufacture in India. Moor's description of the paper-manufacture at Harihar on the bank of Tungabhadra recorded by him on the basis of the notes made by him in the hurry of the seige of Dharwar in A.D. 1790 is not so scientific as Buchanan's account recorded above. If we can discover such detailed accounts of the paper-manufacture centre in other parts of India, either early or late, they would facilitate our reconstruction of the history of these centres on documentary evidence.

When Buchanan recorded his account of the paper-manufacture in Behar and Patna in A.D. 1811-1812 many inventions and improvements in the making of paper had already taken place in Europe e.g. the discovery of *Chlorine* by Scheele (A.D. 1774), the discovery of the bleaching action of *Chlorine gas* by Berthelot (A.D. 1785), the discovery of the bleaching action of *Soda ash* by Leblanc (A.D. 1791), the introduction of *bleaching powder* by Tennant of Glasgow (A.D. 1800) and the introduction of *resin* for sizing of paper-pulp (A.D. 1807). It is possible to suppose that Buchanan was aware of at least some of those discoveries and improvement in Paper-making current in Europe prior to his visit to Behar and Patna.

In connection with Buchanan's account of the paper-manufacture at Behar and Arwal in A.D. 1811-1812, I have to invite the attention of the reader to a very interesting paper by Mr. A. F. M. Abdul Ali, on the *Daphne Paper of Nepal*, published in the *B. C. Law Volume*, Part I, (pages 377-391). I note below some points from this paper which will acquaint the reader with the history of Nepal paper-industry as recorded by Mr. Ali:—

(1) *Paper-making* in Nepal had attained a high degree of technical excellence at a remarkably early age.

1. Vide p. iii of Intro. to Vol. I of Buchanan's *Report (Patna-Gaya)*. Buchanan carried out to the letter the instructions of the Governor-General regarding this survey. His report on *fine arts, common arts and manufactures* is made according to the following instructions:—

"VI.—The progress made by the natives in the *fine arts*, in the *common arts*, and the state of the *manufactures*; you will describe their architecture, sculptures, and paintings, and inquire into the different processes and machinery used by their workmen, and procure an account of the various kinds and amount of goods manufactured in each district. It should also be an object of your attention to ascertain the ability of the country to produce the *raw materials* used in them, and *what proportion, if any, is necessary to be imported from other countries and under what advantages or disadvantages* such importation now is, or might be made..... Should it appear to you that any new *art or manufacture* might be introduced with advantage into any district you are to point out in what manner you think it might be accomplished."

(2) When Europe was trying to find out the secrets of cheap paper to meet the growing demand for it among civilised nations, Nepal was transforming *wood-pulp* into paper and flooding the Gangetic valley with very cheap writing material.

(3) The theory that the art of paper-making was brought to India by the Mughals is not acceptable.

(4) It will be difficult to prove any direct connection between the Nepal paper and the Mughal Court.

(5) There is little affinity between the process of Nepal paper-making and those followed in Kashmir and the Punjab where imperial patronage bore fruit.

(6) It was from China that paper made its way into Nepal.

(7) The paper-industry of China entered Nepal between 7th and 9th centuries when Chinese influences impressed themselves deeply on Nepalese culture and civilization.

(8) Nepal paper once commanded a very extensive market. It was exported southwards to Hindusthan and northwards to Sokyagumba, Digarchi and other places in Tremountane Bhote. It was used all over Kumayun and was sold at Patna, Kessari, Sarun, Janikpur, Darbhanga, in Tirhoot, Purneah, Govindgunge, Alligunge in Sarun, Nichoul and Lorun in Gorukpur, Toolsipur, Bulrampur, and Tandah in Oude. This was the condition of Nepal paper-industry as recorded by Mr. Hodgson, the British Resident at Khatmandu in 1837 and also by Dr. Campbell, who resided in Nepal at this time.

(9) In 1831 (8th December) Mr. B. H. Hodgson, the then resident at Khatmandu sent specimens of Nepal paper to Mr. H. T. Prinsep, Secretary to the Governor-General for presentation to Lord William Bentinck. Hodgson recommended that Nepal paper should be used for office records in place of the common paper of Hindustan. Dr. Campbell, the Asst. Resident fully endorsed the opinion of Hodgson.

(10) Lord Auckland made an inquiry about Nepal paper¹ in 1837. In 1841 British Government opened a factory at Darjeeling with Dr.

1. Buchanan refers to the Nepal paper imported into Bihar in A.D. 1811-1812 as follows :—

Pages 678-679 of Vol. II — Of Exports and Imports (*Patna-Gaya Report*).

"A little of the paper comes from Nepal; the remainder comes mostly from Shahabad. It is exported to the east. The quantities both exported and imported are probably much underrated, the whole manufacture at Arwal on both sides of the Son being worth on the spot 28,000 R. When this is smoothed and fitted for the market, it will be at least worth 32,000 R. and probably 24,000 will be exported, 217 belonging to these districts and 517 to Shahabad."

Campbell in charge of the work but it was closed on 16th April 1842 as it was found uneconomical to run it.

(11) Mr. Ali concludes his paper by observing "that Government made anything but a fair trial of the scheme and its failure may reasonably be attributed to the lukewarmness of the high officials." He thinks, however, that a vast field for the development of this nationalist paper-making industry is still lying in India with a view to make India dependent on none but herself for her writing material. I fully endorse these remarks of Mr. Ali as their force has been brought home to all writers and editors of literary works and newspapers in India in these days of scarcity of paper consequent upon war conditions.

Like the history of the Daphne paper of Nepal the history of Indian paper centres, if reconstructed from reliable data, will enlighten us as to how this paper industry originated, developed and finally declined. It will also impress upon the present day industrialists the necessity of starting this industry at different centres in India again with the necessary improvements to suit the present conditions of labour and life in our village which ought to be made economically self-sufficient and free from unemployment, which has threatened the very existence of the villagers at critical stages of our national history in the past and will do so also in the near future when the war-time employment will cease and our labourers will be thrown on their own resources.

5. SOME NOTES ON THE HISTORY OF INK-MANUFACTURE IN ANCIENT AND MEDIÆVAL INDIA AND OTHER COUNTRIES *

The Government MSS Library at the B. O. R. Institute, Poona, contains many MSS written on *Palm-leaf* and *Bhūrjapatra* or birch-bark. Some of these MSS are very old and written in indelible black ink. Every time they are seen by an inquisitive visitor, he puts a question: What is the composition of this ink which has remained indelible for hundreds of years? I have met this question for the last 27 years and pointed out my finger to Dr. Bühler's remarks on this subject as I had not carried out an independent inquiry about the history of the ink used for writing by our ancestors for more than 2,000 years on *Palm-leaf* and *Bhūrjapatra* or birch-bark. Dr. Bühler collected many *Bhūrja* MSS in Kashmir and these are deposited in the Government MSS Library at the B. O. R. Institute. In his *Report*¹ on these MSS he sneaks of Kashmir Brahmins and Libraries of MSS (*Section B*, pp. 19-33). About the ink used for writing on *Bhūrjapatra* he observes:

Page 30.—“The preparation of ink which was used for *Bhūrja* MSS is known. It was made by converting almonds into charcoal and boiling the coal thus obtained with *gomūtra* (*urina bovis*).² The ink thus obtained is not affected by damp or water and as the birch-bark likewise stands water well, it is possible to improve dirty old MSS by washing them or by wetting at least particularly illegible portions. I have employed this method very frequently to make out doubtful passages. The Pandits regularly kept the MSS in water before selling them to me in order to improve their appearance.”

The formula for ink recorded above by Dr. Bühler on the authority of a local Pandit³ need not necessarily lead us to infer that it was in use during the last 2,000 years. We must, therefore, hunt up from

* *Pratyakṣa*, Vol. III, No. 4, pp. 1-15.

1. Published as an Extra Number of the *Journal of the Bombay Branch, Royal Asiatic Society*, 1877. In *Part I* of this *Report* Bühler deals with his (a) *Personal Narrative*, (b) *The Kashmirian Brahmins*, and (c) *Account of some Kashmirian MSS purchased*.

2. Bühler states: “My authority for this recipe is P. Dayaram Jotsi who was also particularly anxious about the rediscovery of the method of preparing the birch-bark for writing.”

3. Pandit Durga Prasad Kachur of Jammu (Kashmir) who visited the B. O. R. Institute in April 1945 informed me that in Kashmir people use €14 in the preparation of ink along with other ingredients. €14 is the *Mark soor* obtained by the burning of *Ṛṣṭ* wood, which is a kind of *Kdyur* or aromatic pine.

historical sources of the datable variety some such recipes and see if they are identical with the recipe given to Bühler in 1875. Before I record such recipes I shall record below some observations on the antiquity of *ink* as a writing accessory in the history of human civilization in general and of India in particular. My friend Dr. S. M. Katre in his *Indian Textual Criticism*¹ makes the following remarks about the history of *ink* and *lekhani* (instrument of writing) :—

Page 9. —“Ink seems to have been used for writing from very early times. It has been surmised by Mackay and others that the specimen of a theriomorphic jar found at Mohenjo Daro in the shape of a conch-ant ram with a deep hollow in the back may have been an ink-well. Coming to more well-known times the statements of Nearchos and Q. Curtius make it very probable that *ink* was used in India already during the *fourth century* B.C. The Kharoṣṭhi Documents from Khotan prove its popularity at least in the *first century* A.D. But the *oldest specimen of writing with ink* so far known is found on the relic-vase of the stūpa of Andher and is certainly *not later than the second century* B.C. Painted inscriptions are still found in the caves at Ajanta. The Jains have later used *coloured ink* extensively in their MSS. Besides chalk, red lead or minium (*hingula*) was used as a substitute for ink, already in ancient times.

The general name of an “instrument of writing” is *lekhani*, which includes the stilus, pencils, brushes, reed and wooden pens. Already in the *fourth century* B.C. the professional writer is called *lipikara* or *libikara*; in the *seventh and eighth centuries* A.D. the writer of documents is called *divirapati*; since the *eleventh century* the professional writer is also referred to as *Kāyastha*, although as a caste-name it first occurs in the Kaṇasva inscription of A.D. 738-39. Other designations of the writers of inscriptions are *Karaṇa(ka)*, or more rarely *Karaṇin*, *Sāsaniha* and *dharmalekhin*. Calligraphically Indian MSS are not significant.”

The foregoing survey of the history of *Pen* and *Ink* in India is illuminating so far as it goes but it does not say anything about the *recipe of ink* used for writing by our forefathers say from B.C. 500 onwards if not earlier.

We can get a fair idea of the *Ink-manufacture* current in India at the time of the British advent from the following remarks² of Francis Buchanan—(page 622 of *Patna-Gaya Report*, Vol. II, published by the Behar and Orissa Research Society) :—

1. Published by the Karmatak Publishing House, Bombay 1941, with *Appendix II* by P. K. Code (pp. 98-128) on the *History and Progress of Cataloguing of Sanskrit and other MSS in India and outside (between 1800-1941)*.

2. Vide pp. 126-130 of *Bhadradya Vidyā*, Bombay, June 1945, Vol. VI, No. 6. My paper on the *Paper-manufacture at Bihar and Arwal in 1811-1812*, etc.

A.D. 1811-12: Speaking of the state of Arts and Commerce in the Patna and Bihar districts, Buchanan observes:—

"A few people live by making *ink*, which is kept both in a *liquid* and solid form. 95 S.W. of *linseed oil* give 4 S.W. of *lamp-black* collected by an earthen lamp. Take 4 S.W. of *lamp-black*, 5 S.W. of *gum* of the *Mimosa Indica*, add a little *water* and rub in an *iron mortar* with a wooden pestle for 3 hours. Then infuse $\frac{1}{2}$ S.W. of *gallnuts* in 10 S.W. of *water* and add the strained infusion to the rubbed material. Then rub again for 3 hours, then put the pot into the sun until the paste dries sufficiently to admit of its being made into small lumps, which are dried in the sun. These do not spoil by keeping a considerable time."

c. A.D. 1650: Saint Rāmadāsa¹ of Mahārāṣṭra in his section called *lekhana-nirūpaṇa* (*Dāsabodha*, Daśaka 19, Samāsa 1) states that the *ink* to be used for writing on paper should be prepared from *lamp-black*. Round pieces of *lead* of different colours as also *vermilion* should be kept in stock. Dried *lac-dye* should be obtained by careful selection and pieces of *rags soaked in ink* should be dried and kept in stock.

A.D. 671: When the Chinese traveller I-tsing visited India in the latter part of the seventh century with a desire to copy Sanskrit MSS for being taken to China he ordered some *paper and cakes of ink* from China as stated by him in his *Travels*.² At this time the Indian monks at the Nalanda monastery where I-tsing lived used to write on *Bhūrja* and palm-leaves but neither I-tsing nor his predecessor *Huien-Tsiang*³ has recorded any recipe of the *ink* used by Indians.

In the article on *Ink* (कान्क) in the Marathi Encyclopaedia *Jānakośa* (by S. V. Ketkar), Vol. 20 (का १५), 1926, we are informed as follows:—

- (1) The use of ink for writing purposes began many years after the art of writing came into vogue.
- (2) It is difficult to say who invented *ink* and when.
- (3) Originally in all places lamp-black (कान्क) was generally used for ink-manufacture with a mixture of the juice of *mākā*, *gum* (गोंद), and *sugar* (शकर).
- (4) Some important writings were recorded on palm-leaves and buried in the ground or kept in water and in this condition they lasted for centuries.

1. Vide pp. 126-128 of *New Indian Antiquary*, Vol. VII (1945)—my paper on "Saint Rāmadāsa's Discourse on the Writing and Preservation of MSS and its Importance for the History of Indian Palaeography."

2. Vide p. xxiv of Intro. to I-tsing's *Record* (671-695) translated by J. Takakusu, Oxford, 1896—see also p. 210 of *Paper Making* (by K. B. Joshi, 1944), my paper on *Migration of Paper from China to India* (A.D. 105-1500)—Appendix E.

3. Vide p. 146 of *Life of Huien Tsiang*, Trubner, 1911.

The above information cannot be verified as the sources from which it is culled are not mentioned in the article.

In the article on *Ink* in the *Encyclopaedia Britannica* (14th edition, Vol. 20, pp. 360-2) no history of *Ink* is recorded.

A.D. 1290: The Mahārāṣṭra Saint Jñāneśvara in his *Jñāneśvarī* completed in A.D. 1290 mentions मसि (*masi*) or ink in the following passage :—

“ मग काजक नाणि मसो ।
न दित्ते विषचना वैली । ”

In a Sanskrit Buddhist text called the *Kāraṇḍa-vyūha* (Calcutt edition, p. 69) reference is made to मूत्रं (birch-bark), करम (pen) and मसि (ink) in the following extract :—

“ वदि मगचन् ! डिष्पमानायापि भूर्जस्य संधिघटे, न मसि, न च करमं । मदीयेन लोमितेन मसि कुर्वाचर्मकुपाज्य भूर्जे कुर्वात्सि मंषा च करमं कुर्वात्सि मगचन् मम नास्ति लेदं सरीरस्य । स च मे मातापितृभूते मयेत् गुह्यमापि गुह्यम् । ”

This is one of the earliest references to the writing accessories but we are not in a position to infer the composition of the मसि or *ink* referred to in this passage.

A.D. 1130: Someśvara, the Cālukya king, in his encyclopaedic work, viz. *Mānasollāsa*² or *Abhilāṣitārtha-Cintāmaṇi*, deals with *materials for painting*³ in which we find *Haritāla* (yellow orpiment) for the yellow Colour and *Kajjala* (soot or lamp-black) for the black-

1. I note the remarks on (1) *Chinese Ink*, and (2) *Marking Ink* from this article:—

(1) *Chinese Ink* — China Ink or Indian Ink is the form in which ink was earliest prepared and in which it is still used in China and Japan for writing with small brushes instead of pens. It consists essentially of lamp-black in very fine condition baked up with a glutinous substance.

(2) *Marking Ink* — Many vegetable juices, e.g. *Coriaria thymifolia*, *Smeacarpus anacardium*, *Anacardium occidentale* (Cashew), are inks of this type.

2. Vide page 15 of Vol. II of *Mānasollāsa*, edited by G. K. Shrigondekar, G. O. Series, Baroda, 1939.

3. *Ibid.* Intro, p. 7 — *Materials for Painting* as summarised by the editor are as follows :—

“The author now deals with painters and painting, as also with the methods of preparing *Vajralapa* (adamantine paste), painting brushes, pure and mixed colours. In his opinion there are only *four* *Suddha* or original colours. *white*, *red*, *yellow* and *black*; and he recommends the use of *Sankha* (conch) powder for white colour. He distinguishes three kinds of red colour and recommends *Darada* (red lead) for reddish brown, *Alakaka* (red sap) for blood-red, and *Gairika* (red chalk) for dark red. He prescribes *Haritāla* (yellow orpiment) for the yellow colour and *Kajjala* (soot or lamp-black) for the black colour. While dealing with the *Mitra-varnas* he recommends *gold* to be used in showing the golden ornaments.”

colour.¹ The use of lamp-black as an essential ingredient of ink is observed in all recipes for ink current in some parts of India not only in historic times but even today. The use of *Haritāla* (yellow orpiment) is very common in all old MSS for correction of letters or deletion of long passages.

c. A.D. 1650 : During the Mughal and Maratha periods of Indian history there was a wide-spread use of paper for State records and as a result of the Muslim contact many Persian and Arabic terms had become current with reference to the art and profession of writing. Accordingly, in the small lexicon *Rājavyavahārah* composed by Raghunātha Paṇḍita by the order of Shivājī the Great about A.D. 1650, verses 216-326 (Poona edition of Rāj. Kośa, 1880) deal with "लेखनकर्त्री" which is full of foreign terms pertaining to *writing* and their explanation in Sanskrit. The following verses 216-218 refer to मर्षीकार (ink-maker) and मर्षी (*ink*) as also मर्षीपात्र (ink-stand) with its foreign equivalents रत्नधान, चापी, द्रोति respectively :—

" दह्नर लेखनाका स्याद् दस्तुर्दारस्तु लेखकः ।
 नखिसिद्धा लेखकः स्याद् यावेदी हस्तकः स्मृतः ॥ २१६ ॥
 रत्नधानो^१ मर्षीकारो मर्षी शायी मर्षीलिता ।
 मर्षेलेखनपात्रं तु कलमूदानामिधानकम् ॥ २१७ ॥
 लेखनी तु कलम् द्रोतिर्मर्षीपात्रं च मुषिणी— ।
 चाकेर्द्रोतिस्तथा डोकदानी निपांसपात्रकम् ॥ २१८ ॥ "

The above extract clearly shows that the *ink-maker* (मर्षीकार or रत्नधान) was a recognized person at the royal court in the seventeenth century on account of the great demand for ink which he must have met. The State record department (दस्तुर्) consumed large quantities of writing accessories such as *paper, ink and pens* and there sprung into being a class of persons who met these wants. An economic history of the trade in writing accessories during different periods of Indian history is worth investigating and recording.

1. Ibid. Text p. 15—

" वीतेषु हरिताले स्याद् कृते कज्जलमिष्यते ।
 शुद्धा वर्णा इते घोकावधारविश्वसंभवाः ॥ १५६ ॥ "

On p. 13, the artists and their qualifications are mentioned. They ought to be प्रयत्न, मायक, तज्ज, सुसमरेसाधिशारद, विधिनिर्माणकुशल, वज्रलेखनकोविद्, वर्णप्रणदग्ध, and धीरसे कृतप्रभम्.

2. In the गोत्रावलि of *Sukla-yajurvediya Mādhyandina Brahmins* (by V. T. Shete, Poona, 1942) I find on p. 56 a family of the surname "रत्नधान्" with "द्रोति" Gotra. I believe this surname "रत्नधान्" is identical with "रत्नधान" or मर्षीकार (Ink-maker) mentioned in the राजसूयव्याहरीकोश. I am told by some friends that there are some persons at Poona and Kolhapur, bearing the surname "रत्नधान्" and that they are Brahmins. Possibly they got this surname on account of their profession of ink-making.

Another noteworthy point for our history of *ink-manufacture*¹ in the above extract is the mention of two kinds of ink-stands,² viz. : (1) *मर्षणपात्रो* or *पात्रे* for writing documents, and (2) *मुद्रिणी* or *सिक्किणी* for *seals* impressed on documents. This distinction clearly proves that there were in use *two kinds of ink*, one for *writing* and the other for *sealing* purposes. Unfortunately, the extract does not record the recipes for these varieties of ink. Perhaps it may be possible to trace such recipes in the Maratha records or even in Mughal records of the earlier period.

The *Sabdakalpadruma* (Hitavadi ed., Calcutta), p. 981, records many words used in Sanskrit language about *Ink* (मसि), such as—

- (1) मसिचक्रम्, त्रिकण्डातेजा;
- (2) श्लेषा, काली, अङ्गनम्, मयी (*Sabdaratnāvalī*);
- (3) रज्जवी (Kṣīrasvāmin — c. A.D. 1050);
- (4) मलिनाम्बु, मयी (Hemacandra — *Abhidhānacintāmaṇi*, III, 148);
मसि = शैवालिकाशुण्डम् (*Rudra and Śabdaratnāvalī*);
- (5) मसिका — शैवालिका (*Sabdaratnāvalī*) (v.l. मलिहा in some works);
- (6) मसिधानं — मस्वाधारः (*Sabdaratnāvalī*);
- (7) मसिधानां — मस्वाधारः (दोषा (invernacular), मसिमणि, मेलाम्बु,
वर्षकूपिका, मेलाभन्दा, मेलाम्बु, मसिधानम् — (*Sabdaratnāvalī*),
मसिकुली (Hemacandra), मांसकूपिका (Jaṭādhara);
- (8) मसिनं — लपिच्छकम् (*Uṇḍādikōṣa*);
- (9) मसिचक्रम् — त्रैलोक्यः (*Trikaṇḍateja*);
- (10) मसिचक्रम् (मांसं प्रकल्पेन सूत्रे उद्धारितम्);
- (11) मस्वाधारः (*Hārḍāvalī*), अस्त्रनां इति केषिन्;

1. *Amarakōśa* (Kāṇḍa III, 10) mentions मसो (Ink) and the commentator Kāṇḍasvāmin (c. A.D. 1050) explains: “अस्यो रज्जवी” (vide p. 346 of *Amarakōśa*, edited by H. D. Sharma and N. C. Sardesai, Poona, 1941).

Hemacandra (A.D. 1088-1172) refers to *Ink* as follows in his lexicon *अभिधान-चिन्तामणि* (मस्यपात्रम्—III) p. 198 of printed edition with a separate index Volume):—

“मसिधानं मसिकुली मलिनाम्बु मयां मयी ॥ १४८ ॥”

Hemacandra comments —

“मासिधानं [मासिचक्रम्] इति मसिधानं मयांमात्रम् ॥ १ ॥

मये कुर्यात् मासिकुली ॥ २ ॥”

Yśāvasvākhā (A.D. 1050) in his lexicon *शुद्धवार्ता* (edited by G. Oppert, Madras, 1893, p. 138) refers to *Ink* as follows —

“मेलाम्बुदो मसिचक्रो मेलाम्बु मलिनाम्बु च ।”

Page 710 —

“मेलामणि = Ink; मेलाम्बु = Ink-bottle;
मेलाम्बु = Ink; मयांघटो = Ink-bottle.”

2. In a letter from Surat, dated 14th May 1616, the writer orders: *a fair large standish* (i.e. ink-stand)—see p. 61 (No. 287) of *India Office Records Calendar*, 1928.

- (12) मसिमाषिः — मस्याधारः (*Sabdaratndhall*);
 (13) मसिचर्चनम् — रसगन्धा (*Trikāṇḍaleṣa*);
 (14) मसी — काली (*Naijadhacarita*, IX, 63 —
 “त्वत्स्वनिर्घन्मसीकदुर्घोमसीमये सल्लिपिरूपमागिष।”
 — शैवालिकारूपम् (*Sabdaratndhall*);
 (15) मसीजलम् — मसी, काली (*Trikāṇḍaleṣa*);
 (16) मसीधानी — मस्याधारः (*Trikāṇḍaleṣa*).

Those who are interested in the linguistic aspect of the word मसी, its derivatives and synonyms may study all the usages recorded above. I am concerned in this paper with the recipes of मसि. The above usages do not refer to such recipes and hence are not useful for my present inquiry. They only depict the widespread use of मसि or *Ink* for writing purposes after about A.D. 500 as vouched by the several lexicons quoted in the *Sabdakalpdruma*.

Mr. A. S. Gadre, Director of Archaeology, Baroda, has published *A Note on Jaina MS Writing and Preservation*. My friend Dr. H. Goetz, Curator, Baroda Museum, was kind enough to send me a copy of this note, which is “mainly based on the information received from Muni Punyavijayaji.” In this note Mr. Gadre refers to *Inks and Colours* as follows:—

3. Inks and Colours.

“A look at the MSS would show that a variety of *colours* and *inks* have been used for the illustrations and the text. For writing the texts, *golden, silver, black* and *red inks* have been used. The use of the first two is accompanied by difficulties and is very costly. They were used in special MSS prepared for royal personages, ministers and very rich persons. Specimen copies were especially got written some years back here (c. 18, c. 19 and c. 20). The red ink is not very suitable to the eye and was therefore used only in writing and making important portions or the beginning or end of chapters. It was also used for drawing the border lines of folios, or for drawing geometrical designs. The most popular ink was of course the black. *Formulas* for the preparation of these inks are available in some Jaina texts. How fresh the old colours look even now can be realised by a look at some of the MSS. It may be here noted that any ink which contained lacquer, कापी or iron rust was not suitable for writing. A specimen of such a spoiled MS is kept here (see c. 15). Samples of these inks are kept for view in this exhibition (D2, D3, D4, D6). इस्ताल or vermilion (D5) was used for painting yellow the wrong or unnecessary portions from the text. That was a sign of deletion.”

These notes were prepared by Mr. Gadre for the benefit of visitors to the collection of some rare MSS and some instruments and means of writing in his charge.

Prof. H. R. Kapadia in his elaborate article on *Jain Manuscripts* [pages 98-127 of *Bombay University Journal—New Series*, Vol. VII (Sept. 1938), Part 2] makes the following remarks about the various types of ink used for writing Jaina MSS :—

Pages 109-111 — Now a word about the preparation of various types of ink. To begin with, I may quote the following lines from Mitra's N.S.M. (*Notices of Sans. MSS*) Vol. III, p. vi :—

"The ink used for writing *puthis* is of two kinds : one fit for *paper* and the other for *palm-leaves*. The former is made by mixing a coffee-coloured infusion of *roasted rice* with *lamp-black*, and then adding to it a little *sugar*, and sometimes the juice of a plant called *Kesurta* (*Verbascina Scandans*). The labour of making this ink is great, for it requires several days' continued trituration in a mortar before the lamp-black can be thoroughly mixed with the rice infusion, and want of sufficient trituration causes the lamp-black to settle down in a paste, leaving the infusion on top unfit for writing with. Occasionally *acacia gum* is added to give a gloss to the ink..... Of late an infusion of the *amblich myrobalan* prepared in an *iron pot* has occasionally been added to the ink, but the tannate and gallata of iron formed in the course of preparing this infusion are injurious to the texture of paper, and Persian MSS sometimes written with such ink suffer much from the chemical action of the metallic salts.

The ink for the palm-leaf MS consists of the juice of the *Kesurta* mixed with a decoction of *atta*. It is highly esteemed, as it sinks into the substance of the leaf, and cannot be washed off. Both the inks are very lasting and being perfectly free from mineral substances and strong acids do not in any way injure the substance of the paper or leaf on which it is applied. They never fade and retain their gloss for centuries."

Muni Punyavijayaji, too, has pointed out some of the methods regarding the preparation of various kinds of ink. For instance he has quoted 4 methods of preparing ink meant for *palm-leaf* MSS; and they are based upon *verses* ¹ supposed to be about 300 years old. As is well

1. They are as under :—

"सहस्र-सूत्र-विक्रमाः काशीसं कोहमेव नीली च ।
 समकाल-बोन्धुताः मवति मयी तादृशप्राणाम् ॥
 कञ्ज पा (वे ?) इव बोले भूमिल्या पारदस्य लेखं च ।
 उल्लिखन्नेव विपक्षिया बक्षिया काकम कुट्टिया ।
 तातकलेम व पुषयो योभिर्यती द्रं मही होइ ।
 तेन विमिहिया पता बचइ रयभीइ दिवसुभव ॥
 कोरवए वि सरावे भंगुलिया कोरकम्मि कञ्जलए ।
 मइ सरावकम्मं चाये विय वि (क) सं सुकइ ॥

known instead of writing on palm-leaves with reeds, etc. at times letters are scratched on them by an iron style with a pointed end or the like. In such cases, Punyavijayaji says that *firstly soot* is prepared by burning the *Kācalis* (cocoanut-halves) or of *almonds*. *Secondly*, it is mixed with oil, *thirdly* the surface of the leaves concerned is besmeared with this mixture, and *fourthly* and lastly this surface is cleaned by means of some cloth so that the portions scratched out remain black, and the rest of the portion remains as it was.

As regards the preparation of ink to be used for paper MSS he has pointed out *six methods* referred to in the Hindi verses¹ (one Sans. verse) quoted by him. This ink is suitable for the cloth MSS too. Furthermore, by quoting one Sanskrit verse² he has indicated one more method for the preparation of ink for cloth MSS. He has also pointed out methods of preparing *gold ink*, *silver ink* and *red ink*, and has added that *asjagandha* and *yakshardama* (preparations of which are explained by him are utilized for writing *mantras*, *tantras* and *yantras*. It may be noted that if ink contains some sticky substance, there is a likelihood of folios or leaves getting stuck together especially in the damp weather. Instead of trying, methods pointed out in *Lekhanakalā* (p. 115),³ may be resorted to, if they are scientific.

विषुमन्दुर्बुधैस्त्वापरदुर्दं व वीयकनविरसं ।
 भिज्ज वि तोएण द्रं मद्द आत्तं जसं सुसइ ॥
 निर्यासात् विषुमन्त्राद् द्विगुणितो षोडशतः कज्जलं
 सज्जातं तिलतिलतो (?) हुतवद्दं तीमातवे मर्दितम् ।
 पात्रे शुक्लमये तथायवजलेलांशारत्तैर्मथितैः
 सज्जलातकमुक्तराजससुक्लं साम्यं रसोऽयं मयी ॥ ”

विषुमन्त्र = निम्ब (विषुं कुष्ठं मन्दयति, मृदाति वा) see अष्टांगहृदयकोष by K. M. Vaidya, p. 352.

मुक्तराज = माका (Marathi).

मफ्लातक = बिन्बा (Marathi) *Mazhing-nut*.

त्रिफला = हिरदा, बेहदा, अंबुदा (the three myrobalans).

लाक्षारस = Lac-dye.

कासीस = Green vitriol, green sulphate of iron (Marathi हिराकस).

1. These verses begin with “जितना काजल,” and end with “— मलीविधि.” They contain in all 14 lines taken from “Some work on medicine” as stated by Prof. Kapadia. The name of this work is not mentioned. Lines 3 and 4 of these lines read as follows:—

“ मध्यं विषुं सद्गुन्दं गुन्दायै बोलमेव च ।
 मर्दयेद् यामगुन्दं तु मयी वज्रसमा मयेत् ॥ ”

2. This verse reads as follows:—

“ बोलस्य द्विगुणो गुन्दो गुन्दस्य द्विगुणा मयी ।
 मर्दयेद् यामगुन्दं तु मयी वज्रसमा मयेत् ॥ ”

3. See *Jaina Citra-Kalpadruma*, Muni Punyavijayaji's article on “ भारतीय अने धमन लेखकानि अने लेखनकला. ”

Page 102 — Mr. C. D. Dalal makes the following remarks about writing accessories referred to by Rājasekhara in his *Kāvya-mīmāṃsā* (vide p. xxviii of Intro.— G. O. Series, Baroda, Vol. I, p. 50):—

“Rājasekhara says that a poet must have always near him a box, a board with chalk, leaves of the *Tādī* tree or barks of the *Bhūrja* tree with pens¹ and ink-pots, leaves of the *Tāla*² tree with iron nails and well-rubbed plates.”

Page 107 — Mitra in his *Notices of Sanskrit MSS* (Vol. III, p. vi) observes:—

“To mark the ends of chapters and for writing rubrics, colophons and important words on paper, an ink made of *Cinnabar* or *āltā* is sometimes used..... In commentaries, the quotations from texts are generally smeared over with a little red ochre, which produce the same effect which red letters in European MSS were intended to subserve, and whence the term rubric got into currency..... in Burmah some sacred Pill works are written with a thick black varnish on palm-leaves throughout richly gilt and wrought over with scrolls and other ornaments. Ordinarily Burmese MSS have the edges of the leaves painted and sometimes gilt.”

All the above extracts about ink and other writing accessories given by Prof. Kapadia are informative enough but they cannot prove the history of ink-manufacture as such as they do not record recipes of ink from datable sources. The verses about the preparation of ink recorded by Muni Punyavijayaji are comparatively modern being about 300 years old.

In the edition of the *Lehgapaddhati* edited by C. D. Dalal and G. K. Shrigondekar (G.O.S., Baroda, 1925), *Appendix V* (p. 95) records some recipes of ink (मर्ग) as follows:—

“सहस्र-सुहृन्-भिकटा कासीसं लोहमेघ नीली च ।
समकञ्जलबोलेयुता मयति श्वयी तादपत्राणाम् ॥”³

1. I may note here the following popular *Subhāṣita* about pen (लेखनी) :—

“कुलमुष्नी न माञ्जरी द्विविधा न च सर्पिणी ।
पद्मश्री न पाशाली यो मान्नाति स पम्बितः ॥ २५ ॥”

(Vide p. 192 of *सुभाषितरत्नमालाकार*, N. S. Press, Bombay, 1911.)

2. Vide p. 182 of *धन्वन्तरौपनिषद्* with *राजनिषद्*, Anandārama, Poona, 1896— Here धीताल and हिनताल are mentioned as two varieties of ताल tree by धन्वन्तरिनिषद्. The धीताल is described by the *राजनिषद्* as “विशासपत्रो लेखाहो मर्गलेख्यदलः” and हिनताल is described as “दिपाकेयम्.”

3. This verse is identical with the verse at the beginning of the extract quoted by Punyavijayaji, viz. “सहस्र.....रौप्यं श्वयी.”

सहचरोति कदापेक्षरितः । शृङ्गेति मागुरतः । त्रिफला प्रसिद्धैश्च । कालीसमिति कर्त्तव्यं येन
काष्ठादि रज्यते । लोहितं (लोहं ?) लोहचूर्णम् । नीलितति गुठीति गुठीनिव्यादकृष्णस्तत्रस्यः ।
इतं विना सर्वेषामग्नीषामुरकस्य स्वापः कियते । स च रसोऽपि समर्थात्तत्रकञ्जबोलेषोर्मध्ये
निक्षिप्यते । ततस्साङ्गपत्रमथो भवति ॥ इति ताङ्गपत्रमप्याङ्गायः ॥

उभयोरपि मय्योर्महाराष्ट्रभाषया हेरलीति प्रसिद्धस्य त्रिगुणीवृक्षस्य वनरातिविशेषस्य
साकलकस्य (साकलकस्य ?) फळरसस्य मध्ये प्रक्षेपे सत्तेजस्य (सव ?) मक्षिकाभावात्सर्वो
गुणा भवन्ति ॥

अष्टवधुष (?) रसेन एरुंक्ष क्षिप्यथा सर्वाणि पत्राणि हाइन ॥ कोफलि (आहतकोपति ?)
मर्चन्ते । तदनन्तरं पिसाश्रुधाभिर्धं तवर्धनाः (रा ?) परनाम चूर्णं मध्ये मुक्त्वा तन्मानेनाम्बु
पूर्वते । पश्चाच्छूर्णं विना द्विप्राणि धवनी (ना ?) नि नीतार्थं नीतार्थं प्रक्षाल्यते । तदनन्तरं
विमलोज्ज्वला पयसीकै (?) वीलीउ च स्यादिति ॥

सांश्च बोळ अनह् हक्त्वारस कज्जलवज्जल अनह् प्रम्बारस ।

भोजराज भिसि निपाह् पानत् फाट् भिसि नचि जाह् ॥

बोळस्य द्विगुणो गुन्दो गुन्दस्य द्विगुणा ऋषी ।

मर्दयेद्यामयुग्मं तु मयी वज्जसमा भवेत् ॥¹

टीपणानि मयी ।

मय्यर्थे [तु] क्षियेदुगुन्दं गुन्दार्थं बोळमेव च ।

साक्षात्भोजरसेनोच्यैर्मर्दयेसाश्रमाजने ॥¹

काजळ टांक १० गुंद् टांक ५ बोळ टांक ३ पूर्व कोरवमेव कज्जलं ताश्रमाजने क्षिप्यथा इदं मर्दते ।
तदनु गुन्दमिश्रितमलेन विन्मुयाप्रक्षिप्तेन पृष्यते, अलककपोतिका जलं च क्षिप्यते । निम्ब-
मयी गुन्द-सदिरगुन्द-बध्दुलगुन्देन वा दिनसत्कं मर्दते । मयी सर्वोत्तमा भवति । न तु धव-
गुन्देन, सर्वथा विनश्यति ॥

मय्याङ्गायः ॥²

The editors of the *Lehhapaddhati* do not indicate the chronology and authorship of the above extracts, which describe : (1) ताङ्गपत्रमयी i.e. ink for palm-leaf MSS, and (2) टीपणानां मयी i.e. ink for writing marginal notes on MSS.

From the recipes of ink from undated and late sources of anonymous authorship we now go to the *Rasaratnākara* of Nityanāthasiddha,³

1. This verse has been quoted by Muni Punyavijaya in his article on "नेस्रनक्षत्राः" in the *Jaina Citra-Kalpadruma*.

2. According to Dr. P. C. Ray (*History of Hindu Chemistry*, Vol. I. (1902), Intro, p. lvi) नित्यनाथसिद्ध, the author of रसरतनसमुच्चय, was contemporary of Roger Bacon, who died in A.D. 1294. रसरतनाकर is a work of another नित्यनाथ सिद्ध (see Aufrecht's *Cata. Catalogorum*, I. 295). According to Dr. Mukherji (p. 17 of *Journal of Ayurveda*, Calcutta, July 1935) नित्यनाथ सिद्ध is posterior to बल्लभाचार्य, the commentator of the सुश्रुतसंहिता who flourished about A.D. 1100 (see Hoernle's *Osteology*, 1907, p. 16). Pt. D. K. Shastri assigns रसरतनाकर of पार्वतीपुर नित्यनाथसिद्ध to the thirteenth century (vide pp. 202-203 of his *मायुर्वेदो इतिहास*, 1942).

a work on alchemy or manufacture of medical preparations from metallic and non-metallic ingredients. In this work which may be assigned to the *thirteenth century* we find the following recipe¹ of ink for writing on *palm-leaves* and birch-bark :—

19th Upadesa, verses 79-80 — मयी

“ त्रिकला-त्रैगुणोद-मल्लाल-करबीरकम् ।
बीजाक्षसयकेतेषां समीपं बीरकचक्रे ॥ ७९ ॥
त्रिपचा मयं शाकपात्रे वंचाहास्याचते मयी ।
साकपत्रेषु भूजेषु लिख्यते परमे हृदम् ॥ ८० ॥ ”

The above recipe is found in the MS of रसरत्नाकर dated *Vikrama Samvat 1632* (=A.D. 1576) in the possession of Rajavaidya J. K. Shastri,² who used it for his edition under reference. If this date is correct we may easily conclude that it was in use prior A.D. 1576. This formula mentions the following materials to be used for preparing indelible ink for writing on साकपत्र and भूज (पत्र) :—

- (1) त्रिकला³— The three myrobalans, viz. :—
 - (i) ह्रीतकी — (Cbebulic myrobalan) *Jnk-nut* (Marathi हिरवा).
 - (ii) बिनीतक — (Beberic myrobalan) (Marathi बेहडा).
 - (iii) चात्री = कामरक = Emblic myrobalan (Marathi चांपळा).

1. Vide p. 166 of the edition of अद्वैतब्रह्म-वादिसूत्र of the रसरत्नाकर of (पार्वतीगुप्त) त्रिपचासिद्धि, by Rajavaidya Pandit Jivaram Kalidasa Shastri, Gondal (Kathienwar), 1940. In the वादिसूत्र (pp. 6-7) त्रिपचा refers to some previous रससिद्ध of experts in alchemy as follows :—

“ भ्यासाचार्यशरसेनः सुषुदिनंवाहनः ।
नागाजुनो रत्नपोषः सुरानन्दो यशोधरः ॥
इन्द्रराज्यं माण्डव्यवर्षटिः सुरसेनकः ॥ ६७ ॥
बाबुदो नागभुदिव्य कण्ठः कापालिको हरः ।
कामनी तापिकः संयुक्तो सम्प्रसारती ॥ ६८ ॥
बाबासुरो मुनिश्रेष्ठो गोविन्दः कपिलो बलिः ।
एते सर्वे तु भूषिता रत्नसिद्धा महाशलाः ॥ ६९ ॥
वरन्ति सर्वलोकेषु निर्मला मरुताः सदा ।
सप्तविंशतिरसिद्धाका रससिद्धिपदायकाः ॥ ७० ॥ ”

Compare with this list of रससिद्ध the long list of महासिद्ध in हठयोगप्रदीपिका (Adyar edition).

2. On p. 184 of the edition Rajavaidya J. K. Shastri states :—

“ प्रथमस्यास्य लेखनसमयः विक्रमसंवत् १६३२ मिते वर्षे आधिनशुद्धनवम्यां विंशत्यां त्रिंशतौर्ध्वं संयः ”

This MS was obtained by Shastriji from Mr. Narayana Prabhakara Vinod of Beroda and preserved in the MSS collection of his Rasashale at Gondal.

3. Vide Monograph on त्रिकला by Ramash Bedi, Lahore 1944, p. 55.

“ लोके ते कीट-कर्मकी हरकृते कीट-कर्मो (galls) ते अथ्थी स्वाही कर्माई जाती है. ”

We may compare the use of इरीतकी for ink-manufacture in India about A.D. 1300 with similar use of *gall-apples* in Europe mentioned by *Albertus Magnus* in his book on plants while dealing with the *Oak* tree. *Albertus* flourished between A.D. 1193 and 1280. He was called the "Aristotle of the Middle Ages."¹

(2) अंग is possibly a corrupt form of अङ्ग = अङ्गराज = *Traling eclipta* or *Eclipta olba* = माका (Marathi). In the राजनिचन्दु and the भाष्यव्यास it is called केदारजन (अङ्गवद्राजते रजपति कृष्णीकरोति च अङ्गराजः — See p. 408 of अष्टांगहृदयकोष by K. M. Vaidya, Trichur, 1936).

(3) कांठ = कुण्ड = yellow barberia (Marathi पिपळा कोरता).

(4) मस्तात = मस्तक (*Semecarpus Anacardium*) Marking-nut (Marathi शिप्पा). Cp. Punyavijayaji's quotation :—

“सत्रज्ञानकचुक्रराजस्युक् सम्यग् रसोऽथं ऋषी ”

(5) करवीरक = करवीर (*Nerium odorum*) Oleander (Marathi कनेर); “बीजात्रसन्म प्लेषाम् समाप्तं” — This may mean “equal quantities of the above (five) ingredients, each of the size of a mango-stone.”

(6) बोल = बोल (Marathi), a kind of gum (vide शम्भुकीश by Date and Karve).

(7) कज्जल = Lamp-black (Marathi काजळ).

(8) ताडुवात्र = Copper vessel or tray.

If the date of Nityanātha Siddha, viz. *thirteenth century* A.D. as given by scholars like Pt. D. K. Shastri, is correct we may look upon the *recipe for ink* given by him as about *650 years old*. This formula contains some of the main ingredients found in the recipes for ink (about 300 years old) quoted by Muni Punyavijayaji in his article on *हेलनकला* in the *जैन चित्रकल्पद्रुम*. Nityanātha states that this recipe gives *indelible ink for palm-leaves* and *Bhūrja-leaves* (ताडपत्रेषु मूर्तेषु लिख्यते परमं दृढम्). I believe this indelible character of the ink prepared according to this recipe is due mainly to the use of मस्तात or marking-nut. Even now the washermen use the oil of the marking-nut for marking clothes of their customers before washing. Even by repeated washing the marks made with this oil are not washed out. In the article on *Ink* in the *Encyclopaedia Britannica* already referred to a similar use of *Cashew* (*Anacardium occidentale*) nut for preparing *marking ink* is mentioned. In this connection I made inquiries of some friends with a request to report to me the use of मस्तात or *marking-nut* for ink-manufacture now current in any part of India. One such report² has just reached me from my learned friend Mr. A. S. P. Ayyar, M.A., I.C.S.,

1. Vide p. 57 of *History of Plant Sciences* by Howard S. Reed.

2. I take this opportunity of recording my most grateful appreciation of Mr. Ayyar's interest in this and other subjects of my study.

District and Sessions Judge, Chittoor, who observes in his letter to me of 10th June 1946 :—

"In our district of Malabar we have always been making *ink* (of a *black* and *durable* variety) by chopping off *myrobalans* and *marking-nuts* in water in an *iron saucepan*."

I hope that scholars from other parts of India will report to me any practice of the above type in which *marking-nut* or *मरुतान* is used for ink-manufacture. The use of *मरुतान* or *मरुतानक* for medical purposes is mentioned in all medical texts, early or late, but so far as I am aware, I have failed to notice any mention of its use for marking purposes or for ink-manufacture in any Sanskrit text medical or non-medical. Evidently the use of *मरुतान* in the ink for palm-leaves and birch-bark MSS is responsible for the *water-proof* writing on these leaves, to which reference is made by Bühler in his *Kashmir Report*. I have now to request scholars interested in this subject to find out and record all *recipes of ink* especially prior to A.D. 1300 with a view to account for the indelible ink used for writing out MSS which have remained intact for hundreds of years.

My present study of the history of *ink-manufacture* in India raises the question about the recipes for ink used by the ancients in other lands. I have not studied this question but shall record here some remarks about the *Ink* used by the Egyptians for writing off *papyrus* :—

1. Speaking of ancient Egyptian civilization, H. A. Davies observes in his *Outlines of the History of the World* (Oxford, 1937), pp. 18-20 :—

"The ancient Egyptians at least *five or six thousand years ago*, possibly much earlier had invented for themselves an alphabet, the earliest known alphabet, consisting of *twenty-four signs*. They also had *pens*, inks and paper (*papyrus*) and it is to them that the modern world is primarily indebted for these most necessary devices..... Writing materials consisted of *papyrus* palette, reed pens, *inks*, and *ink-pots*..... The palette was a rectangular piece of wood, eight to sixteen inches long and two or three inches broad, at one end of which were a number of circular or oval hollows to hold *ink* or *paint*, while down the middle was a groove to hold writing *reeds*. These were about ten inches long and from one-sixteenth to one eighth of an inch in diameter. *Ink* was made by thickening water with *gum* and then mixing certain mineral or vegetable substances with it. *Ink-pots* were usually made of *porcelain*."

2. James Baikie in his *Egyptian Papyri and Papyrus Hunting* (London : Religious Tract Society, 1925), p. 21, makes the following remarks about *Ink* used by the ancient Egyptians :—

"The marvellous way in which the *ink* has preserved its colour invariably attracts attention, and shows that anything in the nature of

adulteration must have been unknown." The *black ink* was made of *lamp-black* or *powdered charcoal*, mixed with water, in which a small proportion of *gum* had been dissolved. With regard to the coloured *inks* or *paints*, *white* was derived from *lime-white*, blue from lapis-lazuli powder, *green* from *sulphate of copper*, *red* and *yellow* from *mineral earths*. The scribe was in the habit of *grinding* his own colours on a stone slab, which probably accounts for their good *lasting quality*. When they were ready he applied them to the papyrus by means of *reed pens*, or rather (in the earlier period), *brushes*. These were from 8 to 10 inches long, and from a sixteenth to an eighth of an inch in diameter; and the writing end was bruised, not cut, at least in the earlier periods. Later a thicker *reed* was used, and the point was cut, as with a quill-pen."¹

3. The *Holy Bible* contains the following references to *ink* :—
Old Testament :—

(1) *Jeremiah*, 36 : 18— "Then Baruch answered them, He pronounced all these words unto me with his mouth, and I wrote *them* with *ink* in the book."

Chapter 36 refers to "roll of a book" (2); "Scribe's Chamber" (12, 21); "leaves" of roll cut with *pen-knife* (23).

(2) *Ezekiel*, 9 : 2— "One man among them was clothed with linen, with a *writer's ink-horn* by his side."

(9 : 3)— "And he called to the man clothed with linen, which had the *writer's ink-horn* by his side."

New Testament :—

(3) *John* (2nd Epistle) 12.— "Having many things to write unto you, I would not write with *paper* and *ink*, but I trust to come unto you and speak face to face that our joy may be full."

(4) *Corinthians* (2nd Epistle of St. Paul to Cor.) Chap. 2 : 3.— "For as much as ye are manifestly declared to be the epistle of Christ ministered by us, written not with *ink* but with the spirit of the living God; not in the tables of stone, but in fleshy tables of the heart."

The above references to *ink* and *ink-horn* are interesting enough and important also, especially those in the *Old Testament*.

4. As regards the *ink* used by the Romans for their books I may quote the following extract from p. 587 of *Smaller Classical Dictionary*

1. I am extremely thankful to Dr. P. M. Joshi, M.A., Ph.D., Librarian, Bombay University Library, for sending me the extract about *ink* from *Baile's* book.

(Supplement) edited by E. H. Blakeney, London, 1913 (Home University Library Series) :—

"Books in Rome were generally written on *papyrus* prepared for the purpose, narrow strips of which were glued together to form a *roll*, to be coiled round a stick. Next to *papyrus* parchment (*membrana*) was used, and the sheets were made up like modern books. *Ink* made of *lamp-black* and *gum* was employed; and instead of a "pen", a *reed* cut like our quill."

5. Prof. J. J. Rein of the University of Bonn in his monumental volume on the *Industries of Japan* (London, Hodder and Stoughton, MDCCLXXXIX) gives us an account of the Japanese Paper Industry (pp. 389-419). In an *Appendix* (pp. 416-419) he deals with Japanese Writing Materials consisting of *Brush, India Ink and Ink Dish*. I note some points from this valuable Appendix :—

- (1) The necessary articles of a Chinese or Japanese *escritoire* are the *brush, India ink, Ink-dish* and water.
- (2) The *yatate* is a portable writing case containing a holder for fluid India-ink and a brush in a copper case.
- (3) The *Sumi-ire* is a handy shallow box for household use with compartments for the *brush, the stick of India-ink* and the *dish*. On an upper tray is a copper or silver vessel for water.
- (4) The *Fude* or brush is prepared of the hair of the rabbit or deer.
- (5) The use of the *India-ink* (Jap. *Sumi*) dates back further than our writing ink; in Eastern Asia it is at least as old as the use of paper, if not older, for it is believed that it was *invented in China* about a.c. 260-220. The province of *Kiang-si*, and especially the city of *Jaatscheu* south-east of the lake Poyang was celebrated for centuries for its excellent *India-ink*. It had the valuable property of *becoming harder and blacker with increasing age.....* The English name *India-ink* indicates the way by which it first came into Europe.
- (6) *Lamp-black* and *animal glue* form the essential constituents of *India-ink*. Musk, camphor, etc. are used to hide the unpleasant odour of the glue but are not essential.
- (7) *Pine-oot* (*Susu*) which was formerly used was superseded by *lamp-black* (Jap. *yu-yen*) obtained by burning any kind of fat or fatty oil.
- (8) The *Sudawi* or *India-ink dishes* used by the Chinese or Japanese are made of a fine-grained dark stone, chiefly of old state, serpentine or coloured marble.

I hope the foregoing notes on the history of Ink-manufacture in ancient and mediæval India together with some information about the Ink

used in ancient Egypt,¹ Greece, Rome, Japan, China, etc. would be found useful to the students of this subject in India.

1. After this paper was drafted my friend Dr. P. M. Joshi, Librarian, Bombay University, was kind enough to lend out to me *Ancient Egyptian Materials and Industries* by A. Lucas. London, 1934. In this scholarly book there is a section on *Writing Materials* (pp. 307-312) from which I note some interesting information—

- (1) In the section on *Writing Materials* Lucas deals with *Pigments* (Ink), *Writing-grounds*, *Pens*, *Grinders*, *Palettes* and *Marking Ink*.
- (2) *Pigments* were generally red and black and occasionally of additional colours.
- (3) A *palette*, bearing the name of Meri-Aten, with five colours black, green, white, red, yellow was found in the tomb of Tut-ankhamun.
- (4) Lausie found an Egyptian palette (about B.C. 400) with colours made of charcoal, red ochre, gypsum, blue frit and yellow oxide of lead.
- (5) The Rainer papyri (9th to 13th century A.D.) were written with *carbon ink* and *iron ink*. The carbon used for making ink was *soot* in most cases.
- (6) An old Arabic book in the Royal Library at Cairo (anonymous and undated) contains a recipe of *Persian Ink* prepared from *date stones* kept over a fire in a sealed earthen vessel and ground down when cooled and then mixed up with *gum arabic* and *water*.
- (7) The use of *carbon* for Ink-manufacture dates back to about B.C. 3400 in Egypt.
- (8) In the tomb of Tut-ankhamun some imitation cakes of pigment, of stone and glass and imitation pens of glass were found.
- (9) *Marking Ink*—Egyptians had their linen garments marked with their names in Ink, one specimen of which was analysed by Ainsworth and Mitchell. This Ink was proved to be organic material, free from carbon.

6. A BRIEF NOTE ON THE HISTORY AND PROGRESS
OF CATALOGUING OF SANSKRIT AND
OTHER MSS IN INDIA AND OUTSIDE
(BETWEEN A.D. 1800 & 1941)*

But for the high regard entertained by our ancestors for manuscripts since the art of writing came into vogue the transmission of the wide variety of thought that now permeates our life and culture would have been an impossibility. The oral communication of texts from generation to generation as in the case of the *R̥gveda* must have been materially facilitated by the earliest attempt to put this *magnum opus* of our R̥sis in written characters, whether on the *bhūrja-patra*, the *tāla-patra* (palm-leaves) or any other medium then available to our forefathers. The history of the writing¹ of manuscripts in India before the Christian era is difficult to reconstruct but not so in the case of the writing of Manuscripts after the Christian era² as some MSS of this latter period belonging to the early centuries of the Christian era are available for such study. Apart from these MSS on *Bhūrja* etc., recently a MS,³

* *Indian Textual Criticism* by S. M. Katre, pp. 99-178.

1. Max Müller in his *History of Ancient Sanskrit Literature* (1859) devotes no less than 27 pages to the question of "Introduction of Writing" (pp. 257 to 270 of Panini Office reprint of Max Müller's *History*). Dr. Bühler, who 40 years later published his work on *Indian Palaeography*, is thanked by Max Müller in the Preface for the index at the end of his *History*. Dr. Bühler is mentioned here as "a pupil of Professor Benfey." In the monthly magazine *The Dawn* (Calcutta, January 1901) Sir Jadunath Sarkar (then Professor of English, Patna College) has given a summary of Bühler's *Indian Palaeography* which gives the history of Indian alphabets from B.C. 350 to A.D. 1300.

2. See pp. 2-3 *supra* and Aop. III below.

3. Vide p. 179 of Report of *Arch. Sur. of India* (1926-27). While this gold MS was being prepared the Chinese were using paper for their MSS (vide pp. 71-76 of the *Journal of the American Oriental Society*, Vol. 61, No. 2, June 1941 — A. W. Hummel's paper on "The Development of the Book in China" in which we find the story of the Chinese book as it developed step by step from the *wooden or bamboo slip* to the *silk or paper scroll*, from the scroll to the folded album and from the album to the paged book of modern times.) We note here the early chronology of this story from Hummel's very learned and instructive paper:—

B.C. 13th and 14th Centuries—Incised divination bones with inscriptions discovered in 1899 in Honan province show that books existed at this time (Shang dynasty). The pictograph for a "volume" appears on these bones and on early bronzes.

B.C. 1st Century—Thousands of inscribed slips found in the desert sands of Chinese Turkestan.

A.D. 96 — Seventy-eight wooden slips containing an inventory of weapons, discovered by Folke Bergmann of Sven Hedin's Expedition (about 10 years ago) in Central Asia.

A.D. 103 — Ts'ai Lun, the inventor of paper offered his product to the throne. Ts'ai Yuan a scholar who died 37 years after paper was first made wrote to a friend as follows: "I send you the works of the Philosopher Hsu in ten scrolls—unable to afford a copy on silk, I am obliged to send you one on paper."

consisting of 20 leaves of gold with writing incised on one side of each leaf has been discovered in Burma during excavations at Hmawza by Mons. Charles Duroiselle. This MS is 6½" in length and about 1¼" in breadth and contains short extracts from the *Abhidhamma* and *Vinaya Pīṭakas*. From the palaeographical point of view it is regarded as the most instructive find yet made in Burma. The characters of this MS are similar to those of the inscriptions incised round the lower and upper rims of a large silver *stūpa* found at the place and of the same date viz. 6th or beginning of the 7th century A.D.

These rare finds indicate the importance attached by the ancients to MSS and the sanctity with which they were cared for and preserved by them in spite of the political vicissitudes of the changing periods of history. In spite of all this care and sanctity and in spite of the wealth of MSS preserved in India and Greater India their neglect if not destruction was the order of the day during the early period of the British advent¹ in India owing to several factors, which need not be discussed here.

We owe much to the European scholars in the matter of critical study of our MSS and the early history of Indology is closely connected with their lives and labours. The work of Sir William Jones, Max Müller, Colebrooke and a host of other scholars has laid the foundations of critical scholarship² in the field of Indology in general

1. Edward Moor in his *Narrative of Operations etc. against Tipoo Sultan* (London, 1794) makes some remarks about Canarese documents.—"On public or important matters the Canarese, we believe, write on common paper, but their ordinary accounts and writings are done with a white pencil on black paper, or rather a cloth which is prepared something like our slate paper and the pencil is a fossil, very similar to French Chalk." Moor obtained specimens of these documents from a waggon load of them kept in a pagoda at Doridrug but they were obviously account books.

Saint Rāmadāsa of Mahārāṣṭra (seventeenth century) has got a special chapter in his *magnum opus* the *Dātābodha* called the *lekhana-nirūpaṇa* which contains detailed instructions re. the writing of MSS in Devanāgarī characters and their preservation. We propose to give an English rendering of it on a future occasion for the benefit of the students of Indian Palaeography.

2. The critical scholarship in the field of research in Indology is necessarily connected with the idea of collecting MSS and printing their lists or catalogues. The origin and development of this idea is admirably dealt with by Dr. S. K. Belvalkar in his Foreword to Vol. I of the *Descriptive Catalogue of the Govt. MSS Library* (now with the B. O. R. Institute, Poona), Bombay, 1916. We note here the early chronology of this origin and development:—

c. A.D. 1774 to 1779 — Sir Robert Chambers, a friend of Sir William Jones and Burke and sometime President of the Asiatic Society of Bengal, collected a library of Indian books (vide *Verrede* to Weber's Catalogue of Berlin MSS, 1853). The unique collection of Sanskrit MSS was later purchased by the Prussian Government in 1842 and deposited in the Imperial Library of Berlin.

1789 — Sir William Jones published his English Translation of *Sāṅkhyata*.

and of Sanskrit learning in particular. The history of this critical scholarship is now too well-known to every Indologist to be repeated in this short note, which will be confined to the history of Cataloguing¹ of MSS in India. We may, however, record here a fact not so well known to Indian Sanskritists that the first European to evince interest in Sanskrit was a German Jesuit, who is referred to by Bernier in his *Travels*² in a letter dated 4th October 1667 and whose full name was Father Heinrich Roth. This scholar drew up "the first specimens of Sanskrit ever printed or engraved (as for a book) in Europe or indeed anywhere." These specimens will be found between folios 162 and 163 of *China Illustrata*³ of Athanasius Kircher,⁴ s. j., published at Amster-

1782 — Col. Mackenzie landed in India as cadet of Engineers on the Madras Establishment.

1796-1806 — Mackenzie was employed in the investigation of the Geography of the Deccan. He later became Surveyor General of India. He collected MSS, inscriptions, plans, maps, and other antiquarian material. His collection was purchased by the East India Company for £ 10,000.

1828 — Catalogue of Mackenzie Collections by H. H. Wilson, published.

1868 (10th May) — Pandit Radhakrishna, the chief Pandit of the Lahore Durbar addresses a letter to the Viceroy and Governor-General of India, in which he compliments the Government of India on the orders they had issued "for collecting the Catalogues of Sanskrit, Arabic and Persian books in existence in many parts of India" and urges the necessity of compiling a Catalogue "of all Sanskrit MSS in India and Europe."

1. Vide *Papers Relating to the Collection and Preservation of the Records of Ancient Sanskrit Literature of India*, by A. E. Gough, Calcutta, 1878 — Mr. Stokes, the Secretary of the Legislative Council drew up a scheme for collecting and Cataloguing MSS. This scheme was approved by the Government of India in their order No. 4338-48 dated Simla, 3rd November 1868. The Government of Bombay acting under the orders of Government of India on 10th December 1868 requested Dr. Kielhorn and Dr. Bühler to undertake the search of MSS in the Bombay Presidency. The Bombay Government had, however, already taken the initiative in this matter by keeping some money at the disposal of Dr. Bühler on 1st November 1866 for the purchase of MSS. The MSS collected by Dr. Bühler with the help of this money now form the 1866-68 collection of the Government MSS Library at the B. O. R. Institute. For further history of this search for MSS vide Dr. Belvalkar's Foreword referred to already (paras 7 ff.).

2. Comte's Edn. London, 1891, p. 329, Bernier observes:—"I was acquainted with Rev. Father Ros a Jesuit, a German by birth and Missionary at Agra who had made great proficiency in the study of Sanskrit." His full name was Father Heinrich Roth, s. j. He was attached to the Goa Mission. He journeyed from Goa to Agra about A. D. 1650-1660, and studied Sanskrit during these years. Roth went back to Rome from Agra about A. D. 1665. He drew up for Father Kircher five engraved plates published by Kircher in his *China Illustrata* referred to by Bernier (on p. 332). The first four plates contain the alphabet and elements (in *Devanagari* characters) of Sanskrit explained in Latin; the 5th plate is Our Lord's Prayer and an Ave Maria in Sanskrit and Latin to serve as an exercise for beginners.

3. Vide p. 332 of Bernier's *Travels*, foot-notes 1-3.

4. *Ibid.*, Kircher (born 1602 and died at Rome A. D. 1680) was one time Professor of Oriental Languages at Würzburg.—For other curious engravings after Indian drawings, vide pp. 156-162 of *China Illustrata*.—Aurecht in his *Catalogus Catalogorum* refers to the MSS in the possession of Prof. Julius Jolly at Würzburg and at the Würzburg University (vide C. C. III, p. IV).

dam by Janszon in A.D. 1667. Though the first specimens of Sanskrit were put in print as early as A.D. 1667 the first published Catalogue of Sanskrit MSS appeared in A.D. 1807¹ i.e. 240 years after the appearance of Kircher's *China Illustrata*. The progress of Cataloguing of Sanskrit and other MSS in India and outside since A.D. 1807 will be apparent from the following table based on the list of Catalogues appended to the present note :—

A.D.	Author or Compiler.	Place of Deposit.	Place of Publication of Catalogue.
1807	Editor of Sir William Jones' Works	London	... London
1828	H. H. Wilson	.....	... Calcutta
1838	.....	Fort St. William	... Calcutta
1846	Otto Böhtlingk	... St. Petersburg	... St. Petersburg
1853	A. Weber	... Berlin	... Berlin
1857	William Taylor	... Fort St. George	... Madras
1859	Fitzedward Hall	... ..	... Calcutta
1861	T. S. Condaswami Iyer	Fort St. George	... Madras
1864	T. S. Condaswami Iyer	Benares	... Benares
1864	Theodore Aufrecht	... Oxford	... Oxford
1865	R. Roth	... Tübingen	... Tübingen
1868	R. Lawrence (hand-written list)	... Khatmandoo	... ..
1869	F. Kielhorn	... Bombay Presidency Southern Division	... Bombay
1869	Th. Aufrecht	... Cambridge	... Cambridge
1870	James d'Alwis	... Ceylon	... ..
1870	A. C. Burnell	... ..	... London
1871	G. Bühler	... Gujarat, Kathiawar, Kachch, Sindh, Khandesh	... ..
1871	Rajendralal Mitra	... ..	... Calcutta
1872	G. Bühler	... Gujarat	... Surat
1874	F. Kielhorn	... Central Provinces	... Nagpur
1874	.....	... North Western Provinces	... Benares
1874	G. Bühler (1872-73)	... ..	... Bombay
1875	J. S. Nesfield	... Oudh	... ..
1875	G. Bühler (1874-1875)	... ..	... (Girgaum), Bombay
1876	Georg Orterer	... Dr. Martin Haug's Collections at München	... München

1. Vide pp. 401-415 of Vol. XIII *Sir William Jones' Works*, London, 1807, where a Catalogue of Sanskrit and other Oriental MSS presented by Sir William and Lady Jones has been printed.

<i>A.D.</i>	<i>Author or Compiler.</i>	<i>Place of Deposit.</i>	<i>Place of Publication of Catalogue.</i>
1876	E. B. Cowell and ... J. Eggeling	London	... London
1876	.....	... Calcutta	... Bonnæ
1877	Rajendralal Mitra	... N. W. Provinces	... Calcutta
1877-1886	.....	... N. W. Provinces	... ..
1877	G. Böhler	... Kashmir, Rajputana, Central India	... Bombay
1878	Pandit Devi Prasad	... Oudh	... Allahabad
1878	J. Nesfield and Devi Prasad	... Oudh	... Calcutta
1878	A. E. Gough	... Papers relating to Sanskrit Literature and its Cataloguing etc.	... Calcutta
1879	Pt. Devi Prasad	... Oudh	... Allahabad
1879	Pandit Kashinath Kunte	(1879-80)	... Lahore
1880-81	Pandit Kashinath Kunte	(1880-81)	... Lahore
1880	A. C. Burnell	... Tanjore	... London
1880	Rajendralal Mitra	... Bikaner	... Calcutta
1880	R. G. Bhandarkar	... ..	... Bombay
1880-85	Gustav Oppert	... Southern India	... Madras
1881-1890	Pandit Devi Prasad	... Oudh	... ..
1881	F. Kielhorn	... Bombay Presidency	... Bombay
1881	F. Kielhorn (1877-81)	... ..	... Poona
1881	A. Csoma de Kóros and M. Léon Feer	... ..	... Paris
1882	G. Bühler	... Wien	... Wien
1882	Pt. Kashinath Kunte	... Gujranwalla, Delhi and Punjab	... Lahore, London
1882	H. Oldenburg	... London	... ..
1882	Rajendralal Mitra	... Nepal	... Calcutta
1882	R. G. Bhandarkar	... ..	... Bombay
1882	Bhau Daji Collection..	Bombay	... Bombay
1883	B. Nanjio	... Chinese Trans. of Buddhist Tripitaka— Catalogue	... Oxford
1883	Cecil Bendall	... Cambridge	... Cambridge
1883	P. Peterson (1882-83)	Bombay Circle	... Bombay
1884	Lewis Rice	... Mysore and Coorg	... Bangalore
1884	E. Kielhorn and R. G. Bhandarkar (Viśrāmbāg Collections)	... Poona	... Poona

A.D.	Author or Compiler.	Place of Deposit.	Place of Publication of Catalogue.
1884	P. Peterson	Bombay Circle	Bombay
1884	R. G. Bhandarkar	Bombay Presidency	Bombay
1886	A. Weber (Vol. II)	Bombay Circle	Berlin
1887	P. Peterson	Bombay Circle	Bombay
1887	R. G. Bhandarkar	Bombay Presidency	Bombay
1887-1904	Eggleing Office MSS (India Office)	London	London
1888	S. R. Bhandarkar	Coona	London
1890-1893	Pt. Devi Prasad	Judh Province	Bombay
1892	P. Peterson	Alwar	Bombay
1892	Theodor Aufrecht	Florence	Bombay
1892	Hrsikeśa Shastry	Berlin	Leipzig
1892	(Govt. Ori. MSS Library)	Calcutta	Berlin
1893	R. G. Bhandarkar	Madras	Calcutta
1893	A. F. R. Hoernle	Bombay Presidency	Madras
1893	M. A. Stein	Central Asia	Bombay
1894	P. Peterson	Jammu	Calcutta
1894	R. G. Bhandarkar	Bombay Circle	Bombay
1895	P. Peterson	Bombay Presidency	Bombay
1895	Hara Prasad Shastri	Bombay Circle	Bombay
1895-1902	Hrsikeśa Shastri and Siva Candra Gui	Bengal	Calcutta
1895	E. Hultzsch	Calcutta	Calcutta
1896-1899	P. Peterson	Southern India	Madras
1897	R. G. Bhandarkar	Bombay Circle	Bombay
1898	Hara Prasad Shastri	Bombay Presidency	Bombay
1898	G. Bühler	Bengal	Calcutta
1898-99	(Sanskrit & Tamil MSS)	Tübingen	Wien
1899	Richard Garbe	South India	Madras
1899	P. Peterson	Tübingen	Tübingen
1899-1901	Pt. Kuñja Vihāri Nyāyabhūṣaṇa	Bombay Circle	Bombay
1900	Rajendralal Mitra	Calcutta	Calcutta
1900	P. Cordier (Hand-list)	Bengal	.....
1900	Hara Prasad Shastri	Report for 1895-1900	.....
1901	Th. Aufrecht	Leipzig	Leipzig
1901-1939	S. Kuppaswami Shastri and others (Vols. I to XXVII)	Madras	Madras
1901	A. V. Kathavate	Bombay Presidency	Bombay
1901	A. Kaleaton	Paris	.....
1902	Whish Collection	(South India) London	London

<i>A.D.</i>	<i>Author or Compiler.</i>	<i>Place of Deposit.</i>	<i>Place of Publication of Catalogue.</i>
1902	Jain Śvetāmbara Conference	... (Jaina MSS in India)...	Bombay
1902	M de Z. Wickrema... singhe	London	... London
1902	Cecil Bendall	... London	... London
1904	Rajendral Mitra	... Bengal	... Calcutta
1905	M. Winternitz and A. B. Keith	... Oxford	... Oxford
1905	Hara Prasad Sastri and C. Bendall	Nepal	... Calcutta
1906	Hara Prasad Sastri	.....	... Calcutta
1907	Rajendral Mitra	... Bengal	... Calcutta
1907	A. Calcuton	... Paris	... Paris
1907	S. R. Bhandarkar	... Rajputana and Central India	Bombay
1908	(Jain MSS)	... Calcutta	... Calcutta
1908	Saticandra Vidyā- bhūṣaṇa	... Buddhist Works	... Calcutta
1908	S. Vidyābhūṣaṇa	... Tibet	... Calcutta
1909	Th. Aufrecht	... München	... München
1909	P. Cordier	... Paris	... Paris
1912	M. A. Stein	... Oxford	... London
1912	A. Calcuton	... Paris	... Paris
1913-1939	S. Kuppaswami Sastri and others	Madras	... Madras
1915	P. Cordier	... Paris	... Paris
1916	A. F. R. Hoernle	... East Turkestan	... Oxford
1916	Professors of Sanskrit, Deccan College, Poona	Poona	... Poona
1917	Hara Prasad Sastri	... Calcutta	... Calcutta
1918	N. D. Mironoff	... Petrograd	... Petrograd
1919	Suparsva Das Gupta	... Arrah	... Arrah
1919	Govt. Sanskrit Library (1897-1919)	Benares	... Benares
1920	Telugu Academy	... Cocanada	... Cocanada
1921	R. A. Sastri (Kavindra- cārya list)	.....	... Baroda
1922	Govt. Oriental Library	Mysore	... Mysore
1923	Gopinath Kaviraj	... Benares	... Benares
1923	C. D. Dalal and L. B. Gandhi	Jesalmere	... Baroda
1923	Hara Prasad Sastri	... Calcutta	... Calcutta
1923	Hara Prasad Sastri	... Calcutta	... Calcutta

<i>A.D.</i>	<i>Author or Compiler.</i>	<i>Place of Deposit.</i>	<i>Place of Publication</i>	
			<i>of Catalogue.</i>	
	(History & Geography)			
1924	Jacques Bacot ...	Paris	...	Paris
1925-1930	H. D. Velankar ...	Bombay	...	Bombay
1925	G. K. Shrigondekar and K. S. Ramswami Sastri	Baroda	...	Baroda
1925	Harasprasad Sastri ...	Calcutta	...	Calcutta
1925	Harasprasad Sastri ...	Calcutta	...	Calcutta
1925	B. O. R. Institute ...	Poona	...	Poona
1926	Hiralal ...	Central Provinces and Berar	...	Nagpur
1926	Adyar Library ...	Adyar	...	Adyar
1927	K. P. Jayaswal and Anant Prasad Shastri	Mithila	...	Patna
1928	P. P. S. Sastri ...	Tanjore	...	Tanjore
1928	Govt. Ori. Library ...	Mysore	...	Mysore
1928	Adyar Library ...	Adyar	...	Adyar
1929	(Marathi MSS) ...	Tanjore	...	Tanjore
1929	K. Sambasiva Sastri ...	Trivandrum	...	Trivandrum
1930	R. Fick ...	Göttingen	...	Berlin
1930	Hemacandra Goswami	Assam	...	Calcutta
1930	T. R. Gambier Parry...	Oxford	...	London
1930-31	Otani Daigaku Library	Kyoto	...	Kyoto (Japan)
1931	Harasprasad Sastri ...	Calcutta	...	Calcutta
1931	Marcelle Lalou ...	Paris	...	Paris
1932	Punjab University ...	Lahore	...	Lahore
1933-38	S. S. Deva ...	Dhulia	...	Dhulia
1933	K. P. Jayaswal ...	Mithila	...	Patna
1933	Sri Ailak Pannalal ... Digambar Jain Saraswati Bhavan	Jhalrapatan	...	Jhalrapatan
1934	Jean Filliozat ...	Paris	...	Paris
1935	Chintaharan Cakravarti	Calcutta	...	Calcutta
1935	H. R. Kapadia ...	Poona	...	Poona
1935	A. B. Keith and F. W. Thomas	London	...	Oxford
1936	Oriental MSS Library	Ujjain	...	Ujjain
1936	H. R. Kapadia ...	Poona	...	Poona
1936	P. K. Gode ...	Poona	...	Poona
1957	M. A. Sinsar ...	Philadelphia	...	Philadelphia
1937	P. K. Gode ...	Poona	...	Poona
1937	L. B. Gandhi and C. D. Dalal	Pettan	...	Baroda

A.D.	Author or Compiler.	Place of Deposit.	Place of Publication of Catalogue.
1938	H. I. Poleman ...	United States and ... Canada	New Haven
1938	S. K. Belvalkar ...	Poona	Poona
1939	H. D. Sharma ...	Poona	Poona
1940	P. K. Gode ...	Poona	Poona
1940	H. R. Kapadia ...	Poona	Poona

The above table shows at a glance the history and progress of Cataloguing of Sanskrit and other MSS whether deposited in India or outside. This history covers a period of about 135 years from A.D. 1807 to 1941. The list of catalogues published along with this note is by no means exhaustive as detailed information regarding all the published catalogues of MSS in any single source was not available. Secondly, these entries are based on actual examination of only some of these catalogues available at the B. O. R. Institute, Poona. Entries regarding catalogues not actually examined are taken from Aufrecht's *Catalogus Catalogorum* (3 Parts) and from the *Provisional Fasciculus of the New Catalogus Catalogorum* published by the University of Madras in 1937. Though the present list of catalogues is necessarily tentative it is sufficient to acquaint the reader with the history and progress of Cataloguing of Indian MSS carried out by European and Indian scholars. In spite of this progress which has brought home to the Indian scholars the importance of their undying national wealth the work of publishing Descriptive Catalogues of MSS has not received the attention it deserves. All research in Indology depends on these MSS and the earlier we exploit these decaying sources of our history and culture the better for the enrichment of our literature and history. It is strongly to be hoped, therefore, that the present custodians of MSS collections in India, whether Provincial Governments, rulers of Indian States, learned bodies or public libraries will concentrate their resources and attention on the Cataloguing of their MSS in general and preparing their Descriptive Catalogues¹ in particular.

CHRONOLOGICAL LIST OF CATALOGUES

1807

Catalogue of Sanskrit and other Oriental Manuscripts presented to the Royal Society by Sir William and Lady Jones, (pages 401-415 of Vol. XIII of *Sir William Jones' Works*, London, 1807).

1. Vide pp. 73-81 of *Festschrift Prof. P. V. Kane* (1941) where Prof. Cintaharan Chakravarti of Calcutta writes on the "study of Manuscripts" and makes a fervent appeal to Government to start a MSS Department like the Epigraphic Department for the proper care and scientific cataloguing of MSS. He also suggests new legislation to penalise vandalism with MSS. The *Modern Review* (September 1941) has already endorsed some of Prof. Chakravarti's suggestions.

1828

Descriptive Catalogue of the Oriental Manuscripts collected by the late Lieut.-Col. Colin Mackenzie, by H. H. Wilson, Calcutta, 1828.

1838

Sūcipustaka (a list of MSS of Fort William, the Asiatic Society in Calcutta, etc.), Calcutta, 1838.

1846

Verzeichniss der auf Indien bezuglichen Handschriften und Holzdrucke im Asiatischen Museum, von Otto Böhtlingk, (printed in Das Asiatische Museum an St. Petersburg von Dr. Bernh Dorn) St. Petersburg, 1846.

Codices Indici Bibliothecae Regiae Havniensis enumerati et descripti a N. L. Westergaard, Havniae, 1846.

1853

Handschriften-Verzeichnisse Königlichen Bibliothek, by Dr. Weber, Berlin, 1853 (Vol. I).

1857

Catalogue raisonné of Oriental MSS in the Library of the College Fort Saint George, now in charge of the Board of Examiners, by Rev. William Taylor, Vol. I, Madras, 1857.

1859

Contribution towards an Index to the Bibliography of the Indian Philosophical Systems, by F. Hall, Calcutta, 1859—Hall describes this Index as a "tolerably complete indication of extant Hindu Sophistics."

1861

Alphabetical Catalogue of the Oriental Manuscripts in the Library of the Board of Examiners, by T. S. Condaswami Iyer, Madras, 1861.

1864

Catalogue of MSS in the Library of the Benares Sanskrit College, (published as a Supplement to Pandit, Vol. III-IX, Benares, 1864-74).

Catalogus Codicum Sanscriticorum Bibliothecae Bodleianae. Confecit Th. Aufrecht, Oxonū, 1864.

1865

Verzeichniss Indischer Handschriften der Königlichen Universitäts-Bibliothek in Tübingen. Anhang. Indische Handschriften der Königlichen Oeffentlichen Bibliothek in Stuttgart, von R. Roth, Tübingen, 1865.

1868

List of Sanskrit Works Supposed to be rare in the Nepalese Libraries at Khatmandu, Signed R. Lawrence, Resident, Nepal Residency, 2nd August 1868.

1869

A Classified and Alphabetical Catalogue of Sanskrit Manuscripts in the Southern Division of the Bombay Presidency, by F. Kielborn, Fascicle I, Bombay, 1869.

Catalogue of Sanskrit Manuscripts in the Library of Trinity College, Cambridge, by Th. Aufrecht, Cambridge, 1869.

1870

A Descriptive Catalogue of Sanskrit, Pali, and Sinhalese Literary Works of Ceylon, by James d'Alvis, 1870.

Catalogue of a Collection of Sanskrit MSS, by A. C. Burnell, Part I (Vedic MSS), London, 1870.

1871

Catalogue of Sanskrit MSS, contained in the Private Libraries of Gujarat, Kathiawad, Kachchh, Sindh and Khändesh, Fascicules I to IV, 1871-1873 by G. Bühler.

Notices of Sanskrit MSS, by Rajendralal Mitra, Calcutta, Vols. I to XI (1871 to 1895).

1872

Report on the Results of the Search for Sanskrit Manuscripts in Gujarat during 1871-72, by G. Bühler, Surat, 1872.

1874

Catalogue of Sanskrit Manuscripts existing in the Central Provinces, by F. Keilborn, Nagpur, 1874.

Catalogue of Sanskrit MSS in Private Libraries of the North-West Provinces, Part I, Benares, 1874.

1875

Report on Sanskrit Manuscripts 1872-73, by G. Bühler, Bombay, 1874.

A Catalogue of Sanskrit Manuscripts existing in Oudh for the quarter ending 30th September 1875, by J. S. Neasfield.

1876

Report on Sanskrit Manuscripts 1874-75, by G. Bühler, Girgaum, 1875.
Verzeichniss der Orientalischen aus dem Nachlasse des Professor Dr. Martin Haug in München, by Dr. Georg Orterer, München, 1876.

Catalogue of Buddhist, Sanskrit MSS in the R. A. S. London (Hodgson Collection), by E. B. Cowell and J. Eggeling. *JRAS*, N. S. 1876.

Catalogi Librorum Manuscriptorum Orientalium a Ioanne Guildemeistro adorneti, Fasciculus VII, Bonnae, 1876.

1877

Descriptive Catalogue of Sanskrit MSS in the Library of the Asiatic Society of Bengal, Part I, (Grammar), by Rajendralal Mitra, Calcutta, 1877.

Catalogue of Sanskrit MSS in Private Libraries of the North Western Provinces, Parts 1 to X (from 1877-b6).

Detailed Report of a Search of Sanskrit Manuscripts made (in 1875-76) in Kashmir, Rajputana and Central India, by G. Bühler (Extra No. XXXIVA, Vol. XII of the Journal of the Bombay Branch of the Royal Asiatic Society), Bombay, 1877.

1878

List of Sanskrit MSS discovered in Oudh during the year 1877, by Pandit Deviprasāda, Allahabad, 1878.

List of Sanskrit MSS discovered in Oudh during the year 1876, prepared by John Nesfield assisted by Pandit Deviprasāda, Calcutta, 1878.

Papers relating to the Collection and Preservation of the Records of Ancient Sanskrit Literature, by A. E. Gough, Calcutta, 1878.

1879

Lists of Sanskrit MSS discovered in Oudh (during 1879), by Pandit Deviprasād, Allahabad, 1879.

Report on the Compilation of a Catalogue of Sanskrit MSS for the year 1879-80, by Pt. Kashināth Kunte, Lahore.

1880

Report on Sanskrit MSS for the year 1880-81, by Pt. Kashinath Kunte.

Classified Index to the Sanskrit MSS in the Palace at Tanjore, by A. C. Burnell, London, 1880.

Catalogue of Sanskrit Manuscripts in the Library of H. H. the Maharaja of Bikaner, by Rajendralal Mitra, Calcutta, 1880.

A Report on 122 Manuscripts by R. G. Bhandarkar, Bombay, 1880.

Lists of Sanskrit MSS in Private Libraries of Southern India, by Gustav Oppert, Vol. 1 (1880), 11, 1885, Madras.

1881

Catalogue of Sanskrit MSS existing in Oudh, by Deviprasād, Fascicules III-XIII (1881 to 1890).

Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1880-81, by F. Keihorn, Bombay, 1881.

Lists of the Sanskrit Manuscripts purchased for Government during the years 1877-78, and 1869-78 and a List of the Manuscripts purchased from May to November 1881, by F. Keihorn, Poona, 1881.

Annales du Musée Guimet. Tome Deuxime, Paris, 1881. Analyse du Kandjour, A Cosma de Körös add M. Léon Feer and Abregé des Matieres du Tondjour par Cosma de Körös.

1882

Über eine kürzlich für die Wiener Universität erworbene Sammlung von Sanskrit und Prakrit-Handschriften. von George Bühler, Wien, 1882.

Statement showing the old and rare MSS in Gujranwalla and Delhi Districts, Punjab, examined during the year 1881-82, by Pandit Kashinath Kunte, Lahore, 1882.

Catalogue of Pali MSS in the India Office Library, by H. Oldenberg, London, 1882, (Appendix to the Journal of the Pāli Text Society, 1882).

The Sanskrit Buddhist Literature of Nepal, by Rajendralal Mitra, Calcutta, 1882.

A Report on the Search of Sanskrit Manuscripts during 1881-82, by R. G. Bhandarkar, Bombay, 1882.

Catalogue of MSS and Books belonging to the Bhau Daji Memorial, Bombay, 1882.

1883

A Catalogue of the Chinese Translation of the Buddhist Tripitaka, by B. Nanjio, Oxford, MDCCCLXXXIII (1883).

Catalogue of the Buddhistic Manuscripts in the University Library, Cambridge, by Cecil Bendall, Cambridge, 1883.

A Report on the Search for Sanskrit Manuscripts in the Bombay Circle, August 1882 to March 1883, by P. Peterson, Extra No. XLI, Vol. XVI of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1883.

1884

Catalogue of Sanskrit MSS in Mysore and Coorg, by Lewis Rice, Bangalore, 1884.

A Catalogue of the Sanskrit Manuscripts in the Library of the Deccan College, (being lists of the two Viśrāmbāg Collections)—Part I prepared under the superintendence of F. Keilhorn; Part II and Index prepared under the superintendence of R. G. Bhandarkar, 1884.

A Second Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1883 to March 1884, by P. Peterson, Extra No. XLIV, Vol. XVII of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1884.

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1882-83, by R. G. Bhandarkar, Bombay, 1884.

1886

Verzeichniss der Sanskrit und Prākṛit Handschriften (der Königl. Bibliothek in Berlin) Von A. Weber, Berlin, 1886. (This Catalogue is a continuation of the Volume published in 1853 and describes numbers 1405-1772.

1887

A Third Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1884 to March 1886, by P. Peterson, Extra No. XLV of Vol. XVII of the Journal of the Bombay Branch of the Royal Asiatic Society, Bombay, 1887.

- A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1883-84*, by R. G. Bhandarkar, Bombay, 1887.
- Catalogue of Sanskrit MSS in the Library of the India Office :*
 Part I (Vedic) 1887. Part V (Medicine etc.) 1896.
 Part II (Vyākaraṇa etc.) 1889. Part VI (Political Literature, Epic
 and Paurāṇika literature) 1899.
 Part III (Rhetoric) 1891.
 Part IV (Philosophy etc.) 1894. Part VII (Kāvya, Nāṭka) 1904.
 1888
- Catalogue of the Collections of MSS deposited in the Deccan College*, by
 S. R. Bhandarkar, Bombay, 1888.
 1890
- Catalogue of Sanskrit MSS existing in Oudh Province for the year 1888*,
 by Pt. Devī Prasād (XX to XXII) 1890 to 1893, Allahabad.
 1892
- Catalogue of the Sanskrit MSS*, in the Library of H. H. the Maharaja
 of Ulwar, by P. Peterson, Bombay, 1892.
- Florentine Sanskrit MSS* examined by Theodor Aufrecht, Leipzig, 1892.
- Handschriften-Verzeichniss der Königlichen Bibliothek zu Berlin*, II, 3,
 Berlin, 1892.
- Descriptive Catalogue of Sanskrit MSS in the Library of the Calcutta
 Sanskrit College*, by Hṛṣīkeśa Shastry, Parts I to IX, Calcutta, 1892.
 1893
- Alphabetical Index of MSS in the Govt. Oriental MSS Library, Madras*,
 Madras, 1893.
- Lists of Sanskrit MSS in Private Libraries in the Bombay Presidency*,
 by R. G. Bhandarkar, Part I, Bombay, 1893.
- The Weber Manuscripts. Another Collection of Ancient MSS from
 Central Asia, by Dr. A. F. R. Hoernle, (Reprint from JASB, Vol.
 LXII, Pt. 2, 1893).
- Catalogue of Sanskrit Manuscripts at Jammu*, by M. A. Stein, N. S.
 Press, Bombay, 1894.
 1894
- A Fourth Report of Operations in Search of Sanskrit Manuscripts in
 the Bombay Circle, April 1886 to March 1892, by P. Peterson,
 Extra No. XLIXA of Vol. XVIII of the Journal of the Bombay
 Branch of the Royal Asiatic Society, Bombay, 1894.
- A Report on the Search for Sanskrit Manuscripts in the Bombay Presi-
 dency during 1884-87*, by R. G. Bhandarkar, Bombay, 1894.
 1895
- An Alphabetical Index of Manuscripts purchased upto 1891*, (printed at
 the end of notices of Sanskrit Manuscripts, by M. M. Haraprasad
 Sastri, Vol. XI, Calcutta, 1895. (MSS in this list are described in

the Volumes of the Descriptive Catalogue of the Asiatic Society, Bengal, by M. M. Haraprasad Sastri).

Descriptive Catalogue of Sanskrit MSS in the Library of the Calcutta Sanskrit College, by Hṛīkeṣa Śāstri and Siva Candra Gui, Vol. I (189-), Vol. II (1898), Vol. III (1900), Vol. IV (1902), Vol. V, Fasci 1, Calcutta.

Reports on Sanskrit MSS in Southern India, by E. Hultzsch, No. 1, Madras, 1895. No. 2, Madras, 1903.

A Fifth Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1892 to March 1895, by P. Peterson, Bombay, 1896.

1896

Fifth Report of Operations in Search of Sanskrit MSS in the Bombay Circle, by P. Peterson, Bombay, 1896. *Sixth Report*, Bombay, 1896.

1898

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1887-91, by R. G. Bhandarkar, Bombay, 1897.

Notices of Sanskrit MSS (2nd Series), by M. M. Haraprasād Śāstri, Vols. I and II, Calcutta, 1898.

Sitzungsberichte der Kais. Akademie der Wissenschaften in Wien. Philosophisch — Historische classe, Band CXXXVII, IV, Die Tübinger Kaṭha-Handschriften und Ihre Beshung Zum. Taittiriya-ṛanyaka L. Von Schroeder. Heraprasangegeben Mit Einem Nachtrage von G. Bübler, Wien, 1898.

Report on a Search for Sanskrit and Tamil MSS for the year 1896-97 and 1893-94, No. 1 (1893), No. 2 (1899), Madras.

1899

Verzeichniss der Indischen Handschriften der Königlichen Universitäts-Bibliothek, (Zuwachs der Jahre 1865-1899) von Richard Garbe, Tübingen, 1899.

A Sixth Report of Operations in Search of Sanskrit Manuscripts in the Bombay Circle, April 1895 to March 1898, by P. Peterson, Bombay, 1899. (This contains also a list of MSS purchased by Prof. Peterson in 1898-99).

Catalogue of Printed Books and MSS in Sanskrit belonging to the Oriental Library of the Asiatic Society of Bengal, by Pt. Kuñja Vihari Nyāyabūṣaṇa, 3 Fascicles, Calcutta, 1899-1901.

1900

Notices of Sanskrit MSS, by R. Mitra, Vol. I, Calcutta, 1900.

List of Non-medical MSS collected by Dr. P. Cordier in Bengal, (January 1898 and June 1900).

Report for the Search of Sanskrit MSS (1895-1900) by Haraprasad Sastri.

1901

Katalog der Sanskrit-Handschriften der Universitäts-Bibliothek in Leipzig, von Theodor Aufrecht, Leipzig, 1901.

Descriptive Catalogue of the Sanskrit MSS of the Govt. Oriental Library, Madras, Vols. I to XXVII (1901 to 1939).

A Report on the Search for Sanskrit Manuscripts in the Bombay Presidency during 1897-95 by A. V. Kathawate, Bombay, 1901.

Bibliothèque Nationale, Catalogue Sommaire des Manuscrits Sanscrits et Palis, Paris, 1901, II, 2e Fascicule-Manuscrits Palis Par A. Caletton.

1902

Catalogue of South Indian Sanskrit MSS (especially those of the Whish Collection) in the Royal Asiatic Society, London, 1902.

Jaina Granthāvali, published by Jain Svetāmbara Conference, Bombay, 1902 (a List of Jain Works).

Catalogue of the late Prof. Fr. Max Müller's Sanskrit MSS, compiled by Don M. de Z. Wickremasinghe, JRAS, 1902, pp. 611-651.

A Catalogue of the Sanskrit Manuscripts in the British Museum, by Cecil Bendal, London, 1902.

1904

Notices of Sanskrit MSS, by R. Mitra, Vol. II, Calcutta, 1904.

1905

Catalogue of Sanskrit Manuscripts in the Bodleian Library, Vol. II, begun by Dr. M. Winternitz and completed by Dr. A. B. Keith, Oxford, 1905.

A Catalogue of Palm-leaf and Selected Paper Manuscripts belonging to the Durbar Library, Nepal, by M. M. Haraprasad Sastri, M.A., with a Historical Introduction by Prof. C. Bendall, M.A., Calcutta, 1905.

1906

Report on the Search of Sanskrit Manuscripts, by M. M. Haraprasad Sastri, 1906.

1907

Notices of Sanskrit MSS, by R. Mitra, Calcutta, 1907, Vol. III.

Bibliothèque Nationale, Department des Manuscrits, Catalogue Sommaire des Manuscrits. Sanscrits et Palis par A. Caletton, Paris. I : 1er Fascicule Manuscrits Sanscrits, 1907.

Report of Second Tour in Search of Sanskrit Manuscripts made in Rajputana and Central India, in 1904-05 and 1905-06, by S. R. Bhandarkar, M.A., 1907.

1908

Alphabetical List of Jain MSS belonging to the Govt. in the Oriental Library of the Asiatic Society, Bengal, JASB, 1908 (pp. 407-440).

Descriptive List of Works on Mādhyamika Philosophy, by M. M. Dr. Satischandra Vidyābhushan, JASB, 1908 (pp. 367-370).

Descriptive List of Some Rare Sanskrit Works on Grammar, Lexicography and Prosody, recovered from Tibet, by M. M. Dr. Satischandra Vidyābhushan, JASB, 1908 (pp. 593-598).

1909

Die Sanskrit-Handschriften der K. Hof und Statsbibliothek in München. Theodor Aufrecht, München, 1909. Tomi I, Pars V. Catalogus Codicum Manuscriptorum Bibliothecae Regiae Monacensis.

Catalogue du Fonds Tibétain de la Bibliothèque Nationale Par P. Cordier, Paris, MDCCCXIX, Part II.

1912

Catalogue of the Stein Collection of Sanskrit Manuscripts from Kashmir, Collected by M. A. Stein and now deposited in the Indian Institute, Oxford, by G. L. M. Clanson, JRAS, 1912 (pp. 587-627).

Bibliothèque Nationale. Catalogue Sommaire des Manuscrits, Paris, 1912, III: Catalogue Sommaire des Manuscrits Indiens etc. Par A. Caletan.

1913

Triennial Catalogue of MSS, Govt. Ori. MSS Library, Madras, Vols. I to VIII (1913-1939).

1915

Catalogue du Fonds Tibétain de La Bibliothèque Nationale par P. Cordier, Paris, Part III, MDCCCXV.

1916

Manuscripts Remains of Buddhistic Literature found in East Turkestan, by A. F. R. Hoernle, Oxford, 1916.

Descriptive Catalogue of the Government Collections of Manuscripts deposited in the Bhandarkar O. R. Institute, Poona, Vol. I (Vedic Literature) 1916.

1917

A descriptive Catalogue of Sanskrit Manuscripts in the Government Collections under the care of the Asiatic Society of Bengal, by M. M. Haraprasad Sastri, Vol. I (Buddhistic), Calcutta 1917.

1918

Catalogue of Indian Manuscripts Library Publication Department, Collection of E. P. Minaev and some Friends, compiled by N. D. Mironoff, Pt. I, published by the Russian Academy of Sciences, Petrograd, 1918.

1919

- A Catalogue of Samskr̥ta, Prākṛta and Hindi Works in the Jaiṇ Siddhānta Bhavan, Arrah, edited by Suparava Das Gupta, B.A., Arrah, 1919.
- A Catalogue of Sanskrit Manuscripts acquired for the Government Sanskrit Library, Sarasvati Bhavana, Benares, 1897-1919 (1907 and 1908 not available).

1920

- List of Manuscripts in the Telugu Academy, Cocanada, published in 1920, in Teḷugu Script in the Journal of the Academy (304 MSS).

1921

- Kavindrācārya List, edited with Introduction, by R. Anantakriṣṇa Sastri, GOS XVII, 1921 (A List of the MSS which existed once in the Library of Kavindrācārya, Benares).

1922

- Catalogue of Sanskrit Manuscripts in the Government Oriental Library, Mysore, 1922 (a mere list of names).

1923

- Descriptive Catalogue of Sanskrit Manuscripts deposited in the Government Sanskrit Library, Sarasvati Bhavana, Benares, Vol. I, Pūrva Mīmāṃsā, by M. M. Gopinath Kavirāj, M.A., 1923 (a list with extracts from Select Manuscripts).
- A Catalogue of Manuscripts in Jesalmere Bhaṅḍārs, GOS, XXI, Baroda, 1923.
- Descriptive Catalogue of MSS (A. S. B.) by M. M. Haraprasad Sastri, Vol. II (Vedic), Calcutta, 1923.
- Descriptive Catalogue of MSS (A. S. B.), Vol. IV (History and Geography), Calcutta, 1923.

1924

- La Collection Tibetain Schillong von Constadt à la Bibliotheque de l' institut, Par Jacques Bacot. Journal Asiatique, CCV, 1924, pp. 321-348.

1925

- Descriptive Catalogue of Sanskrit and Prakrit MSS* in the Library of the Bombay Branch of Royal Asiatic Society, Vols. I to IV, by H. D. Velankar, Bombay, 1925 to 1930.
- Catalogue of Manuscripts in the Central Library, Baroda, Vol. I (Vedic), by G. K. Shrigondekar, M.A. and K. S. Ramaswami Sastri, Śiromani, GOS, XXVII, 1925 (a list with an appendix of extracts from Select MSS).

Descriptive Catalogue of MSS (A. S. B.) Vol. V (Purāṇa), by H. P. Shastri, Calcutta, 1925.

Descriptive Catalogue of MSS (A. S. B.) by M. M. Haraprasad Sastri, Vol. III (Smṛti), Calcutta, 1925.

Lists of Manuscripts collected for the Government Manuscripts Library, by Professors of Sanskrit at the Deccan and Elphinstone Colleges containing the following collections :—

(i) 1895-1902, (ii) 1899-1915, (iii) 1902-1907, (iv) 1907-1915, (v) 1916-1918, (vi) 1919-1924, (vii) 1866-1868.

Published by B. O. R. Institute, Poona, 1925.

1926

Catalogue of Sanskrit and Prakṛta Manuscripts in the Central Provinces and Berar, by Rai Bahadur Hiralal, B.A., Nagpur, 1926, (a list).

A Catalogue of Sanskrit Manuscripts in the Adyar Library, (a mere Index of names) by the Pandits of the Adyar Library, Part I (Adyar, 1926).

1927

Descriptive Catalogue of Manuscripts in Mithila, published by Bihar and Orissa Research Society, Patna, Vol. I (Smṛti MSS), by Dr. K. P. Jaysval and Dr. Ananta Prasad Shastri, 1927.

1928

Descriptive Catalogue of Sanskrit MSS in the Sarasvati Mahal Library, Tanjore, by P. P. S. Shastri, Srirangam, Vol. I to Vol. XIX, 1928 to 1934.

A Supplemental Catalogue of Sanskrit Manuscripts secured for the Govt. Oriental Library, Mysore, 1928 (a mere list of names).

A Catalogue of Sanskrit Manuscripts in the Adyar Library, by the Pandits of Adyar Library (a mere index of names), Part II, Adyar, 1/28.

1929

Descriptive Catalogue of Marathi MSS and Books in the Sarasvati Mahal Library, Tanjore, Vol. I to Vol. III, Tanjore, 1929 to 1938.

Revised Catalogue of the Palace Granthappura (Library), Trivandrum, by K. Sambasiva Sastri, 1929 (a list of MSS and printed books also).

1930

Nachrichten von der Gesellschaft der Wissenschaften zu Göttingen, Philologisch-Historische Klasse, 1930, Heft I, pp. 65 ff. Kielhorns Handschriften-Sammlung, by R. Pick, Berlin, 1930, (last part of the catalogue with index).

Descriptive Catalogue of Assamese MSS, by Hemachandra Goswami published by the University of Calcutta on behalf of the Government of Assam, 1930 (Part II of this volume describes Sanskrit MSS).

A Catalogue of Photographs of Sanskrit Manuscripts, purchased for the Administrators of Max Müller's Memorial Fund, compiled by T. R. Gambier-Parry, M.A., Oxford University Press, London 1930.

1931

A Complete Analytical Catalogue of the Kanjur Division of the Tibetan Tripiṭaka, edited in Peking during the K'ang-Hsi Era and at present kept in the Library of the Otani Daigaku, Kyoto, in which the contents of each Sūtra are collated with their corresponding parts in the existing Sanskrit, Pāli and Chinese Texts, etc. published by the Otani Daigaku Library, Kyoto, Japan; Part I (1930); Part II (1931).

Descriptive Catalogue of MSS (A. S. B.) Vol. VI (Vyākaraṇa), by H. P. Shastri, Calcutta, 1931.

Catalogue du Fonds Tibétain de la Bibliothèque Nationale par Marcelle Lalou. Quatrième Partie I Les MDO-Man, Paris, 1931.

Catalogue of Sanskrit Manuscripts in the Punjab University Library, Vol. I, 1932 (a list only), Lahore.

1933

Śrī Rāmādāsī Saṁśodhan (Khaṇḍas I-II), by S. S. Deva, Secretary, Satkaryottejak Sabha, Dhulia (Śaka 1855 = A.D. 1933). This is a Catalogue of Marathi and Sanskrit MSS numbering 1875 in the collection of Śrī Samartha Vāgdevatā Mandir, Dhulia (Khaṇḍa I—1933); Khaṇḍa II—1938.

Descriptive Catalogue of Manuscripts in Mithila, published by the Bihar and Orissa Research Society, Patna, Vol. II (Literature, Prosody and Rhetoric), by Dr. K. P. Jayaswal, 1933.

A Catalogue of Sanskrit Manuscripts and other Books in Śrī Ailak Pannalal Digambar Jain Sarasvatī Bhavan, Jhalrapatan (with the title Granthanāmāvalī), 1933.

1934

Bibliothèque Nationale, Département des Manuscrits, État des Manuscrits etc. de la Collection Palmyr Cordier, par Jean Filliozat (Extrait du Journal Asiatique, Jan.-March 1934), Paris, MDCCCXXXIV.

1935

Descriptive Catalogue of Sanskrit MSS in the Vāṅṅyā Sāhitya Pariṣat, Calcutta, by Cintaharan Chakravarti, M.A., Calcutta, 1935 (a list).

Descriptive Catalogue of the Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XVII, Part I, (Jain Literature and Philosophy), by H. R. Kapadia, M.A., 1935.

Catalogue of Sanskrit and Prakrit MSS in the Library of the India Office, Vol. II (Brahmanical and Jaina MSS), by A. B. Keith, with a Supplement on Buddhists., by F. W. Thomas, Oxford, 1935, (in 2 parts).

1936

A Catalogue of Oriental Manuscripts collected till the end of March 1935, and preserved in the Oriental MSS Library (Prachya Grantha Samgraha), Ujjain, 1936 (a list only).

Descriptive Catalogue of the Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XVII, Part II. (Jaina Literature and Philosophy), by H. R. Kapadia, M.A., 1936.

Descriptive Catalogue of the Government Collections of Manuscripts (B. O. R. Institute, Poona), Volume XII, (Alankāra, Saṅgita and Nāṭya), by P. K. Gode, M.A., D. Litt.

1937

Oriental Manuscripts of the John Frederick Lewis Collection in the Free Library of Philadelphia, by Muhammad Ahmed Simgar, M.M., M.B.A., D.C.S., Philadelphia, 1937, pp. 178-183 describe 8 Sanskrit MSS.

Descriptive Catalogue of the Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XIV (Nāṭaka), by P. K. Gode, 1937.

Descriptive Catalogue of Manuscripts in the Jain Bhaṅḍāra at Patnan, Part I (Palm-leaf MSS), GOS, Baroda, 1937, by L. B. Gandhi, on the basis of Notes of the late C. D. Dalal.

1938

A Census of Indic Manuscripts in the United States and Canada, by H. I. Poleman, American Oriental Series, Vol. 12, American Oriental Society, New Haven, Connecticut, U. S. A., 1938.

Descriptive Catalogue of Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. II, Part I (Grammar), by S. K. Belvalkar, M.A., Ph.D., 1938.

1939

Descriptive Catalogue of Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XVI, Part I (Vaidyaka), by H. D. Sharma, M.A., Ph.D., 1939.

1940

Descriptive Catalogue of Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XIII, Part I (Kāvya), by P. K. Gode, M.A., D. Litt., 1940.

Descriptive Catalogue of the Government Collections of Manuscripts (B. O. R. Institute, Poona), Vol. XVII, Part III (Jain Literature and Philosophy), by H. R. Kapadia, M.A., 1940.

— P. K. GODE.

ADDENDA

The following list has been drawn up since the preceding list was printed off :—

1. A Printed Catalogue of 114 Sanskrit MSS in the private Library of the Maharaja, Tagore Castle, Calcutta.
2. Descriptive Catalogue of the Sanskrit Manuscripts in the Tanjore Maharaja Sarfoji's Sarasvati Mahal Library, Tanjore, by P. P. S. Sastri, B.A. (Oxon.), M.A.—19 Vols., Vol. XIX is a mere list of names of works.
3. Catalogue of Sanskrit Manuscripts collected by the Curator of the Department for the publication of Sanskrit Manuscripts, Trivandrum, by T. Ganapati Sastri, (7 parts).
4. Lists of MSS collected by the Curator for the publication of Sanskrit MSS, Trivandrum, published as Appendices to the Annual Administration Reports of the Travancore State.
5. Annual Reports of the Sri Ailak Pannalal Digambar Jain Sarasvati Bhavan Sukhānand Dharmasāla, Bombay (in 5 parts).
6. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental Library, Mysore. This is in the press.
7. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras, Vols. XX-XXVII, by Prof. S. Kuppaswami Sastri, M.A.
8. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras, Vols. XVI, XVII and XIX, by Prof. M. Rangacharya, M.A. and Prof. S. Kuppaswami Sastri, M.A.
9. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras, Vols. II-XV and XVIII, by Prof. M. Rangacharya, M.A.
10. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras, Vol. I, Parts II and III, by Prof. M. Sheshagiri Sastri, M.A. and Prof. M. Rangacharya, M.A.
11. Descriptive Catalogue of Sanskrit Manuscripts in the Government Oriental MSS Library, Madras, Vol. I, Part I, by Prof. M. Sheshagiri Sastri, M.A.
12. A Catalogue of the Manuscripts in the Mandlik Library, Fergusson College, Poona.
13. A List of Thirty Sanskrit MSS in Kāmarūpa. Journal of the Assam Research Society, Vol. III, Part 4.

14. A List of Buddhistic Logic Works, by Rev. Rāhula Sāṅkṛtyāyana. *Journal of the Bihar and Orissa Research Society*, Vol. XXII, Part I.
 15. A Supplementary Catalogue of Sanskrit Works in the Sarasvatī Bhandaram Library of H. H. the Maharaja of Mysore signed by F. Kielborn.
 16. A few original MSS now preserved in the University Library of Strassburg - Goldstücker.
 17. Die Sanskrit—Handschriften der Universitäts—Bibliothek zu Göttingen, Beschrieben von Prof. F. Keilborn.
 18. Alphabetical Lists of MSS in the Indian Institute, Oxford, by A. B. Keith.
 19. A List of Tibetan Buddhist Manuscripts, by Rev. Rāhula Sāṅkṛtyāyana. *Journal of the Bihar and Orissa Research Society*, Vol. XXIII, Part I.
 20. A List of 69 MSS from the Private Collection of MSS with Pandit Dharmanāth Śastri, Sanskrit Teacher, Government High School, Mangaldai Assam, published in an Assamese Daily.
 21. Liste der indischen Handschriften im Besitze des Prof. H. Jacobi (printed in *ZDMG*, Vol. 33, 693).
 22. Über eine Sammlung indischer Handschriften und Inschriften von E. Hultzsch (printed in *ZDMG*, Vol. 40, 1).
 23. Two Lists of Sanskrit MSS, by G. Bübler (printed in *ZDMG*, Vol. 42, 530).
 24. A Consolidated Catalogue of the Collections of Manuscripts deposited in the Deccan College (from 1868-1884) with an Index, by S. R. Bhandarkar.
 25. De Codicibus nonnullis Indiscis qui in Bibliotheca Universitatis Lundensis asservantur Scripsit Hjärnar Edgren, Lunds Uni. Aarskrift, Tom XIX (15 MSS).
 26. A Partial List of rare MSS belonging to the Adyar Library (60 works).
 27. List of Fifteen MSS in the Edinburgh University Library, by Prof. Eggeling.
 28. MSS in the possession of Prof. Julius Jolly at Wurzburg and at the Wurzburg University Library.
 29. Tod MSS in the Royal Asiatic Society, London.
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7. SOME EVIDENCE ABOUT THE LOCATION OF THE MANUSCRIPT LIBRARY OF KAVINDRĀCĀRYA SARASVATĪ AT BENARES IN A.D. 1665*

In 1941 I published my paper¹ on "Bernier and Kavindrācārya Sarasvatī at the Mughal Court" in which I tried to prove that the Chief of Benares Pandits with whom Bernier came into intimate contact for about three years after the execution of Dara Shukoh in A.D. 1659 was identical with the celebrated Kavindrācārya Sarasvatī, who was responsible for persuading Shah Jahan to abolish the pilgrim tax at Benares and Prayag and who, as a consequence of this achievement, received laudatory addresses in Sanskrit² and Hindi³ from the Sanskrit and Hindi Poets and Pandits of his time. Though the weight of evidence gathered by me for proving the above identity was too heavy to be brushed aside, I could not then produce direct and independent evidence in support of this identity. Fortunately for this identity Dr. Tara Chand of the Allahabad University has now brought forth independent confirmatory evidence and I have great pleasure in recording it here for the information of Sanskritists who have been enchanted by the remarkable personality of Kavindrācārya⁴ Sarasvatī, since Dr. Gangānath Jha published the Catalogue of Kavindra's library called the *Kavindrācārya Sūcipatra* in the Gaikwad Oriental Series No. XVII in 1921.

Dr. Tara Chand in his recent article⁵ on *Rafi-ul-Khilaf* of Sitaram Kayastha Saksena of Lucknow states that this work is written by its author on the lines of Dara Shukoh's *Majma-ul-bahrin*⁶ explaining that

* Edition of *Jagadvijaya-Cehandav*, (Bikaner, 1945) by C. K. Raja, pp. XLVII ff.

1. *Vide* Journal of the S. V. Ori. Institute, Tirupati, Vol. I, Part 4, pp. 1-16.

2. Kavindra.Candrodaya ed. by M. M. Patker and H. D. Sharma, Poona Oriental Series No. 60, 1941.

3. Kavindrācārya (Bikaner MS); copy kindly supplied to me by Dr. Dasharatha Sharma.

4. Kavindrācārya Sarasvatī is different from another Hindi writer Kavindra (born about A.D. 1678) author of *सप्तशतिका*, *विनोदचरितिका*, *श्रीपदावलि*. His literary career belongs to the period A.D. 1719-1746. His name was *उदयनाथ* but he was known as *कविन्द्र* (see p. 211 of *सप्तशतिका चरित्रकोश* by Pt. Chitrao Shastri, Poona, 1937).

5. *Vide* pp. 7-12 of *Journal of Gangānath Jha Institute* Vol. II, Part I (November 1944).

6. *Vide* my article in *B. I. S. Mandal Quarterly*, Vol. 24, pp. 75-78. "Samudra Sangama, a Philosophical work of Dara Shukoh, son of Shah Jahan composed in A.D. 1655." *Samudra-Sangama* is a Sanskrit adaptation of Dara's *Majma-ul-bahrin*. The MS of *Samudra-Sangama* at the B. O. R. Institute, Poona (Govt. Mus. Library) No. 1043 of 1891-95 is dated A.D. 1708.

the differences between the religious beliefs of Hindus and Muslims are superficial and based on lack of understanding, for in reality all paths seek God. Sitaram further states that Dara's *Majma-ul-bahri* was so short that many difficulties remained unexplained and hence he undertook to compose in Persian a commentary on Sri Kavindrācārya's *Yāna Sāra* which is a Bhasha version of the *Yogavāsīṣṭha* in Sanskrit. A MS of Sitaram's work belongs to the Dr. Jha Institute, Allahabad. Sitaram quotes Persian and Arabic texts to show that the teachings of the *Yogavāsīṣṭha* accord with those of Muslim mystics.¹

Dr. Tara Chand then mentions (1) the *Kavindrācārya Śūcīpatra*, (2) the *Kavindrācandrodaya* edited by M. M. Patkar and the late Dr. H. D. Sharma and (3) my article on *Bernier and Kavindrācārya Sarasvatī* and observes as follows:—

"Additional information which confirms Pt. P. K. Gode's suggestion concerning the identity of the Benares Pandit mentioned in Bernier's *Trauels* with Kavindrācārya comes from the *Padshah Namah* of Mohammad Waris, which is the completion of the *Padshah Namah* of Abdul Hamid Lahori. The Manuscript of Waris in the Allahabad University Library contains the following passage (p. 20) b) under the account of the 24th year of the reign of Shah Jahan when he was weighed at Lahore on attaining the 61st year of his age (according to the Lunar reckoning):—

"*Kavindra Sanyāsi* who is a Darbari has a correct taste and complete mastery in Dhrupad² music and Hindi literary composition. He came to the Court of the Emperor (the protector of the world) and obtained permission for entry. His compositions were found pleasing by the Emperor,³ he was exalted with the award of a horse, a robe of honour, and *two thousand rupees in cash*. In esteem he was raised to the height of the sky."

1. Compare Bernier's remarks (p. 345 of *Trauels*, Constable, 1891), on Dara's heresy in his letter to his friend Chaplain, dated 4th October 1667:—

"In conclusion I shall explain to you the *Mysticism* of a great sect which has lately made great noise in *Hindostan* in as much as "certain *Pendets* or *Gentile Doctors* had instilled it into the minds of Dara and *Sultan Sujah*, the elder sons of Shah Jahan".

2. Kavindra composed a Hindi work called the *Kavindra Kalpalatā*. My friend Dr. Dusharatha Sharma has sent me a copy of this work from a Eikaner MS (in the Anup Sanskrit Library). Among the sections of this Hindi work there are sections in praise of Dara Shukoh and Shah Jahan. The Colophons of these sections refer to *Drupada Dohā Kavīdasi* of Kavindra as follows —

"हृदि श्रीवशिष्ठानिश-स्वां-श्याम-मुरस्त्रविचितायां कल्पितायां दारासाहिबिबद्धद्रुपद-
दोहारिकायामि"

"हृदि श्री.....दशरथकल्पितायां साहिबद्वारिकद्रुपदरायामि"

3. Most probably Shah Jahan must have perused or heard the *Dhrupada Dohā* in the *Kavindra Kalpalatā* before sanctioning Rs. 2000 for being paid to Kavindra.

The above passage is very important as it confirms Bernier's account of Kavindrācārya about his status at Shaha Jahan's Court and the pension of Rs. 2,000 given to him by the Emperor and later stopped by Aurangzeb. Secondly the expression *Kavindra Sanyāsi* is a paraphrase of the name *Kavindrācārya Sarasvatī* mentioned in all the Sanskrit sources about this important and influential personality at Shah Jahan's Court. It will thus be seen that Dr. Tara Chand's discovery of the above passage harmonizes and strengthens all that we know about this Sanyāsi from *Sanskrit, Hindi, French and Persian* sources. We are now in a position to study more closely and with confidence all the details about Kavindra's life and character disclosed by all these sources jointly and severally. In the present paper I propose to examine the evidence for locating Kavindra's Manuscript Library at Benares on the strength of contemporary sources.¹

In view of the close contact of Bernier with the Chief of the Benares Pandits now identified with Kavindrācārya, Bernier's account of Benares Pandits and Sanskrit learning as recorded in his letter of A.D. 1667 assumes much historical significance. I may note here what Bernier says about the Benares Brahmins and their learned pursuits :—
P. 334 Travels :—

"The town of Benares, seated on the *Ganges*, in a beautiful situation and in the midst of an extremely fine and rich country, may be considered the general school of the *Gentiles*. It is the *Athens of India*, whither resort the *Brahmins* and other devotees; who are the *only persons who apply their minds to study*. The town contains no colleges or regular classes as in our universities, but resembles rather the schools of the ancients; the masters being dispersed over different parts of the town in private houses, and principally in the gardens of the suburbs, which the rich merchants permit them to occupy. Some of these masters have four disciples, others six or seven, and the most eminent may have twelve or fifteen; but this is the largest number. It is usual for the pupils to remain ten or twelve years under their

1. We cannot consider the *Kavindrācārya Śūci* as a contemporary source for Kavindra's life-history (vide *NIA*, May 1943, pp. 41-42—my paper on the *Kavindrācārya Śūci*—is it a dependable means for the reconstruction of Literary Chronology?). Dr. Benoytosh Bhattacharya stated (*Bulletin of Rama Varma Research Institute*, July 1942, pp. 77-91) that "all works mentioned in the Catalogue (i.e. *Kavindrācārya Śūci*) belong to a period anterior to 1750 A.D." I have pointed out that this statement is misleading because the *Śūci* contains many works composed later than A.D. 1700 and ranging in dates from A.D. 1700 to 1859. The *Śūci* contains some nucleus of the Kavindra MSS Library; but the items forming this nucleus must be verified. There are MSS from Kavindra's Library in the Government MSS Library (B. O. R. Institute), the Oriental Institute, Baroda, the Government Sanskrit College, Benares, the Anup Sanskrit Library, Bikaner, etc. Some of these MSS bear the endorsement—

"श्रीधर्मशर्मा निधानकर्त्रीशाखावर्धकश्चकीर्ति।"

respective preceptors during which time the work of instruction proceeds but slowly for the generality of them are of an indolent disposition, owing in a great measure, to their *diet* and the *heat* of the country. Feeling no spirit of emulation, and entertaining no hope that honours or emolument may be the reward of extraordinary attainments, as with us, the scholars pursue the studies slowly and without much to distract their attention, while eating their *Kichery*, a mingled mess of vegetables supplied to them by the care of rich merchants of the place."

The foregoing extract gives us a graphic picture of the *Bhāratiya Vidyā* as pursued at Benares, painted by an acute Frenchman like Bernier and hence it possesses much historical value for any account of Sanskrit learning¹ at Benares in the 17th century.

Bernier then proceeds to tell us how *Sanskrit* is taught to students at Benares. Speaking of the Sanskrit language *the holy and the divine language* he observes: That it is extremely old, however, it is impossible to deny, the books of their religion, which are of unquestionable antiquity being all written in *Sanskrit*. It has also its authors on *philosophy*, works on *medicine* written in verse,² and many other kinds of books *with which a large hall at Benares is entirely filled*.

I am of opinion that "a large hall at Benares" filled with many kinds of books on philosophy, medicine, etc., referred to by Bernier is

1. From Bernier's account of Sanskrit education current at Benares in A.D. 1665 we turn to the foundation of a Sanskrit College at Benares (vide Dr. S. N. Sen's article on *Sanskrit College, Benares*, in *Journal of Dr. G. Jha Institute*, May 1944, pp. 315-325) Some points from Dr. Sen's paper may be noted here:—

- (1) The Sanskrit College or Pathashala was founded by Jonathan Duncan about A.D. 1792.
- (2) Kasinatha Pandita was the First Rector or Head Preceptor with seven other Professors.
- (3) The discipline of the College was to be maintained according to the edicts of Manu.
- (4) Kasinatha was later dismissed on account of serious malversation (he entered the name of a fictitious Pandit in his bill to receive his allowance). He was replaced by Jatasankara.
- (5) The professors were holding their classes at their residences according to old traditions.

In his article *Sir John Shore, a Friend of the Poor* (pp. 31-49 of the above Journal, May 1944) Dr. Sen has given us the story of Kanharadas, probably a student of the above Sanskrit College. This student hailed from Gwalior. His funds were soon exhausted and being in distress he addressed some letters to Sir John Shore (Governor-General) who appears to have helped this student, who was then 26 years old.

2. Vide p. 338 of Bernier's *Travels*—"On physic they have a great number of small books, which are rather collections of recipes than regular treatises. The most ancient and the most esteemed is written in verse." This is possibly a reference to *Carakasamhitā*.

probably identical with *Kavīndrācārya's Manuscript Library*, the subject of the present paper. Bernier tells us further, while speaking of the *Puranas* and *Vedas* that these books "of great bulk" were shown to him at Benares. Speaking of the *Vedas* he says—"They are so scarce that my Agah (Danishmand Khan) notwithstanding all his diligence, has not succeeded in purchasing a copy. The *Gentiles* indeed conceal them, with much care, lest they should fall into the hands of the *Mahometans*, and be burnt, as frequently has happened." In his remarks on the Hindu worship of idols Bernier informs us on the following points:—

- (1) His visit to Benares while going down the river Ganges.
- (2) His visit to Kavīndrācārya, the chief of *Pendets*.
- (3) Description of Kavindra as a Fakire or Devotee—pension of Rs. 2000 (about 1000 crowns) to Kavindra by Shah Jahan—Kavindra a stout, well-made man with a white silk scarf round the waist and a large scarf of red silk on his shoulders as a cloak—Kavindra often seen in the company of the *Omrabs* and before Shah Jahan—Aurangzeb stops the pension of Rs. 2000 on coming to the throne—Kavindra pays constant visit to Danishmand Khan for one year to get this pension renewed through this Khan—Bernier's "close intimacy with this distinguished personage" and "long and frequent conversations" with him.
- (4) Bernier states: "when I visited him (Kavindra) at Benares he was most kind and attentive giving me a collation in the *University Library*, to which he invited the six most learned *Pendets* in the town" for a debate on the worship of idols.

The large hall at Benares filled with Sanskrit Manuscripts (p. 334 of *Travels*) is, I believe, identical with the *University Library* where Bernier met his friend Kavindra and six most learned Pandits of Benares. If this suggestion is accepted we may be justified in supposing that Kavindra must have deposited all his manuscripts in this hall or *University Library*.

Now as regards the location of this library the editor of *Travels* records the following foot-note on pp. 341-342:—

"Tavernier when travelling from Agra to Bengal in 1665, on which journey he was accompanied by Bernier, was at Benares on the 11th, 12th and 13th December of that year. He tells us (Tavernier's *Travels*, Vol. II, pp. 234, 235) that adjoining a great temple on the side which faces the setting sun at midsummer, there is a house which serves as a College, which the Raja Jai Singh, the most powerful of the idolatrous princes, who was then in the empire of the great Moghul, has founded for the education of the youth of good families. I saw the children of this prince, who were being educated there and had as teachers several *Brahmins*, who taught them to read and write in a language, which is

respective preceptors during which time the work of instruction proceeds but slowly for the generality of them are of an indolent disposition, owing in a great measure, to their *diet* and the *heat* of the country. Feeling no spirit of emulation, and entertaining no hope that honours or emolument may be the reward of extraordinary attainments, as with us, the scholars pursue the studies slowly and without much to distract their attention, while eating their *Kichery*, a mingled mess of vegetables supplied to them by the care of rich merchants of the place."

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I am of opinion that "a large hall at Benares" filled with many kinds of books on philosophy, medicine, etc., referred to by Bernier is

1. From Bernier's account of Sanskrit education current at Benares in A.D. 1665 we turn to the foundation of a Sanskrit College at Benares (vide Dr. S. N. Sen's article on *Sanskrit College, Benares*, in *Journal of Dr. G. Jha Institute*, May 1944, pp. 315-325) Some points from Dr. Sen's paper may be noted here:—

- (1) The Sanskrit College or Pathashala was founded by Jonathan Duncan about A.D. 1792.
- (2) Kasinatha Pandita was the First Rector or Head Preceptor with seven other Professors.
- (3) The discipline of the College was to be maintained according to the edicts of Manu.
- (4) Kasinatha was later dismissed on account of serious malversation (he entered the name of a fictitious Pandit in his bill to receive his allowance). He was replaced by Jatasankara.
- (5) The professors were holding their classes at their residences according to old traditions.

In his article *Sir John Shore, a Friend of the Poor* (pp. 31-49 of the above Journal, May 1944) Dr. Sen has given us the story of Kesharadasa, probably a student of the above Sanskrit College. This student hailed from Gwalior. His funds were soon exhausted and being in distress he addressed some letters to Sir John Shore (Governor-General) who appears to have helped this student, who was then 26 years old.

2. Vide p. 338 of Bernier's *Travels*:—"On physic they have a great number of small books, which are rather collections of recipes than regular treatises. The most ancient and the most esteemed is written in verse." This is possibly a reference to *Carakasasthāna*.

probably identical with *Kavindrācārya's Manuscript Library*, the subject of the present paper. Bernier tells us further, while speaking of the *Puranas* and *Vedas* that these books "of great bulk" were scarce to him at Benares. Speaking of the *Vedas* he says—"They are so scarce that my Agah (Danishmand Khan) notwithstanding all his diligence, has not succeeded in purchasing a copy. The *Gentiles* indeed conceal them, with much care, lest they should fall into the hands of the *Mahometans, and be burnt, as frequently has happened.*" In his remarks on the Hindu worship of idols Bernier informs us on the following points:—

- (1) His visit to Benares while going down the river Ganges.
- (2) His visit to Kavindrācārya, the chief of *Pendets*.
- (3) Description of Kavindra as a Fakire or Devotee—pension of Rs. 2000 (about 1000 crowns) to Kavindra by Shah Jahan—Kavindra a stout, well-made man with a white silk scarf round the waist and a large scarf of red silk on his shoulders as a cloak—Kavindra often seen in the company of the *Omraks* and before Shah Jahan—Aurangzeb stops the pension of Rs. 2000 on coming to the throne—Kavindra pays constant visit to Danishmand Khan for one year to get this pension renewed through this Khan—Bernier's "close intimacy with this distinguished personage" and "long and frequent conversations" with him.
- (4) Bernier states: "when I visited him (Kavindra) at Benares he was most kind and attentive giving me a collation in the *University Library*, to which he invited the six most learned *Pendets* in the town" for a debate on the worship of idols.

The large hall at Benares filled with Sanskrit Manuscripts (p. 334 of *Travels*) is, I believe, identical with the *University Library* where Bernier met his friend Kavindra and six most learned Pandits of Benares. If this suggestion is accepted we may be justified in supposing that Kavindra must have deposited all his manuscripts in this hall or *University Library*.

Now as regards the location of this library the editor of *Travels* records the following foot-note on pp. 341-342:—

"Tavernier when travelling from Agra to Bengal in 1665, on which journey he was accompanied by Bernier, was at Benares on the 11th, 12th and 13th December of that year. He tells us (Tavernier's *Travels*, Vol. II, pp. 234, 235) that adjoining a great temple on the side which faces the setting sun at midsummer, there is a house which serves as a College, which the Raja Jai Singh, the most powerful of the idolatrous princes, who was then in the empire of the great Moghul, has founded for the education of the youth of good families. I saw the children of this prince, who were being educated there and had as teachers several *Brahmins*, who taught them to read and write in a language, which is

reserved to the priests of the idols, and is very different from that spoken by the people."

If the above identification of the *University Library* where Bernier met Kavindrācārya at Benares is correct, we get the following equation of three different sites at Benares :

- (1) Large hall with MSS seen at *Benares*.
- (2) University Library where *Bernier* met Kavindra and six other Pandits for debate on idol-worship.
- (3) The College near a temple where Mirza Raja Jai Singh's sons were being educated as stated by *Tavernier*.

Evidently the College founded by Mirza Raja Jai Singh served as the home for the MSS collection of Kavindrācārya Sarasvati, who being a Fakir or Sanyasi had not a private house with a private library of his own as modern Orientalists with fat salaries possess. Kavindra carried on his disinterested pursuit of knowledge in the interest of Hindu religion and culture and thus attained a supreme position among the Benares Pandits of his time as amply vouched by the addresses in the Sanskrit *Kavindrācārya* and the Hindi *Kavindrācāndrikā*, a MS of which has been recently discovered at Bikaner. I have now to request our Benares scholars to identify the exact site of Mirza Raja Jai Singh's College for his sons referred to by *Tavernier* and seen by him in 1665. If the site of this College can be exactly identified we may regard it as the site for the location of Kavindrācārya's MSS Library¹ at Benares on the strength of evidence recorded in this paper from contemporary sources viz. *Bernier's Travels* and *Tavernier's Travels*, which are sufficiently trustworthy for our present purpose.

1. I note here some MSS from this Library :—

- (1) The Catalogue of Anup Sanskrit Library (by C. K. Raja and K. M. K. Sarma, Bikaner, 1944) contains the following MSS, page 82—MS of *Kalikāpurāṇa* (folios 1-237). On the first and last pages — "श्रीकृष्णविरचितानामकविप्रभावाय-सर्वस्वर्षाभिर्भुवा(अर्थात्)शिवसिंहः १५ दत्तम्". We must identify शिवसिंह. Page 83—MS of *Devipurāṇa*—Owner—कविप्रभावाय.
- (2) B. O. R. Institute (Govt. MSS) No. 762 of 1891-95—MS of *Tattvāloka* of Janārāṇa dated Śrinivāsa 1514-A.D. 1458 endorsed "श्रीमद्विद्यानिधान कवि आचार्य सर्वस्वर्षाभिर्भुवा १५ दत्तम्".
- (3) There are some Kavindra MSS in the Oriental Institute Library, Baroda (vide p. VIII of Introduction to Kavindrācārya Śucipatṛa G. O. S. Baroda, 1921). On p. IX Mr. R. A. Shastri states that he saw at Surat a MS of *Dharma Prayitī* (now in the Oriental Institute, Baroda) with a verse at the end which when rendered into English reads as follows :—

"In the blessed year of 1713 (1657 A.D.) in the month of *Arjuna* (March and April) on the fifth day of the bright fortnight on Tuesday, by me named Śri Kṛṣṇa was copied *Dharma Prayitī* in the Kavindra house" (No. 10344 of Ori. Institute, Baroda). I reserve for a later occasion a verification of this verse and the location of Kavindra house mentioned therein. As Mr. Shastri has not quoted the Sanskrit original of the above translation I am unable to verify the exact significance of 'Kavindra house' and its location.

8. AN ILLUSTRATED MANUSCRIPT OF THE BHĀGAVATAPURĀṆA COPIED IN A.D. 1648*

The late Rao Bahadur D. B. Parasnis published in 1909 a note¹ on a MS of the *Bhāgavatapurāṇa* prepared with profuse illustrations for Raja Pratapsimha of Jaipur (A.D. 1779-1803). Pratapsimha was a great lover of art. He had under his patronage numerous artists with whose help he got prepared a MS of the *Bhāgavatapurāṇa*,² containing beautiful coloured illustrations to illustrate certain episodes of this purāṇa. These illustrations give us an idea of Indian art at Jaipur in the 18th century. This MS was prepared at great expense and the work of preparing it was spread over many years.

Nana Fadnavis, the celebrated minister of the Peshwa got information about this illustrated MS of the *Bhāgavata*. He at once wrote to Apajiram Dabholkar, the Dewan of the Sindhia to make inquiries about this MS and send it to him. Apajiram wrote to Nana Fadnavis as follows:—

“Respectfully I have to state as follows:—

Received your letter of (1 ccha *Jamādīlval*).³ In one of the supplements to your letters you have directed me to forward to you an illustrated MS of *Śrī Bhāgavata*, which you learn on reliable authority, has been prepared by Raja of Jaipur. You have also asked me to request Pāñībāvā⁴ to make a demand for this MS (*pothī*) during the course of his negotiations with the Raja of Jaipur (Jaipurkar). Or if this course is not possible you may request Rāyāji Patil, who is engaged in some diplomacy with the Raja of Jaipur to do this private work of ours. I have already spoken about the matter to Rāyāji Patil and he has promised to carry out my wishes without fail, circumstances permitting. At present, however, the chances of procuring this MS are not favourable and hence the work will be effected as intimacy (with Jaipurkar) develops.”⁵

* *New Indian Antiquary*, Vol. I, pp. 249-253.

1. Vide *Itihāsamgraha*, Vol. I, Part 5—*Atihātik Tīpanak*, p. 37.

2. This Pratapsimha copy of the *Bhāgavata*, with illustrations reminds me of the illustrations prepared by Shrimant Bala Sahib Pant Pratinidhi, Raja of Aundh for the critical edition of another purāṇa, viz., the *Mahābhārata* that is being published by the Bhandarkar Oriental Research Institute, Poona, under the editorship of Dr. V. S. Sukthankar.

3. As the year is not recorded the exact date of this letter cannot be determined.

4. Pāñībāvā = Mahadji Sindia (A.D. 1759 to 12th January 1794) (vide p. 228 of *Oriental Biographical Dictionary* by H. G. Keene, London, 1894).

5. Cf., *Peshwā Daftar Selection*, No. 14 (letter No. 38 of 13th October 1735) Pilaji Jadhav, a Maratha Nardar sent to Peshwa Bajirao a MS of the *Bhāgavata Purāṇa* (excepting three chapters which were missing).

Parasnis states that no further letters on this subject can be traced but information is available that Pātilbāvā (Mahadji Sindia) succeeded in procuring this unique MS for Nana Fadnavis. He also states that this MS is still in existence.¹

The above information about an illustrated MS of the *Bhāgavata* prepared at Jaipur between A.D. 1779 and 1803 reminded me of another illustrated MS² of the *Bhāgavata* available in the Government MSS Library at the B. O. R. Institute, Poona, prepared about 130 years earlier than the MS of the same work referred to by Parasnis. It would appear that both these MSS were prepared in Rajputana, one at Jaipur and the other at Udayapur, both are profusely illustrated in colour and both illustrate the same purāṇa, viz., the *Bhāgavata*, though the difference of time between the B. O. R. I. copy and the Pratapsimha copy is more than 130 years. I have no evidence to prove that the Pratapsimha copy was modelled on the earlier copy in the Government MSS Library dated A.D. 1648. As the B. O. R. Institute copy is now 290 years old lovers of Indian painting will find it very useful to study the characteristics of the Rajputana style of painting prevalent in the middle of the 17th century. I shall, therefore, describe this MS in brief in order to give the students of Indian art some idea about the number of illustrations contained in this MS and the particulars about the date of this copy as recorded by the scribe.

The date of the MS is recorded in the colophon³ of Skandha XII as *Samvat 1705 month of Bhādrapada, Śuklapakṣa, tithi 2, Guruvāra* which is equivalent to *Thursday, 10th August 1648*. The copy was written at *Udayapura*. At the bottom of the full-size illustration on folio 5 of *Skandha VIII* we find the endorsement: "लक्ष्मण चित्तारे सहस्रदी" which possibly contains the name of the painter. The name of the

1. Parasnis does not state in whose possession the MS exists.

2. This is MS No. 61 of 1907-1915. It contains 334 folios, comprising *Skandhas VIII, IX, XI and XII* of the *Bhāgavata*. *Skandha VIII* contains 16 quarter-size, 2 half-size, and 35 full-size illustrations. *Skandha IX* contains 1 quarter-size, 3 half-size and 28 full-size illustrations, *Skandha XI* contains 13 quarter-size, 2 half-size and 12 full-size illustrations. *Skandha XII* contains 1 quarter-size, 3 half-size and 13 full-size illustrations. The total number of illustrations is 129 (= 31 quarter-size + 10 half-size + 88 full-size). The paper of the MS is getting brittle but on the whole the MS is well preserved. The size of each folio is 15½ inches × 8½ inches.

3. This colophon reads as follows:—

"इति श्री भगवन्महाभारतविद्यायां श्रीधरस्वामिविरचित्वायं द्वादशस्कन्धे त्रयोदशोऽध्यायः ॥१३॥
अनिष्कामचित्तैर्नस्मिष्टं बन्धवत्साऽन्वयमनिवादादंनयामददोषं ॥ इति लिखितमशुद्धं शुद्धमेवं न ह्ययं ।
निब्रह्मभारतेणं संन्यस्यति संनः ॥ १ ॥ संन्यस्यं मदत्सवस्वरुद्राहं वसुधैवकुतः । संतोष्यं वणितान्ग-
यतिदिनं वीर्यं च सन्मित्रवत् । ददधं वयवदन्धं न हि च वित्त्ययं हरेनामवर्कं । जैवं सीरति पुलकं
नव च्छायेननुगुरुणां वनः ॥ २ ॥ श्रीमन्महाभारतसंस्मरणार्थं संवत् १७०५, वर्षे । माद्रवा सुदि २ सुती
लिखितंते पुलकं ॥ श्री उदयपुरनगरे ॥"

illustrations carefully, and assess their full artistic value. Before I conclude this note on the *Bhāgavata* MS I may invite the attention of scholars to one good illustration depicting the immolation of Kṛṣṇa's wives on the funeral pyre after his demise which is painted on folio 129 of Skandha XI.¹

As the history of Indian painting has been latterly engaging the attention of Indian² and foreign³ scholars the MS of the *Bhāgavata* described in this note may have some value both artistic and historical as it is a dated MS, rich in large and small well-preserved coloured illustrations. At any rate it is a source for the history of Indian painting deserving a careful study and reproduction of at least some of its coloured illustrations, representative of the school of painting to which it belongs.

style, etc. He writes to me in a private communication dated 23rd May 1938 "I have so far traced out two illustrated MSS of *Bhāgavata* Dāsama Skandha, one being the Gujarati version rendered by the poet Bhālaḡa (early 14th century) with 17th century miniatures, and the other being the dated MS at Jodhpur, with about 100 miniatures with the notes in old Gujarati prose. The date is Samvat 1667 (= A.D. 1611), the painter's name being Govinda. My paper in Gujarati on these two sets will appear next month in *Nava Cetan* (June 1938, pp. 213-220) a monthly published from Calcutta. The Jodhpur MS was announced by me at VII Oriental Conference held at R-rada in 1933 (*Proceedings*, p. 833)". Vide, also his article on *Some Illustrated MSS of the Gujarati School of Painting*, in the same *Proceedings* (pp. 827-833). The colophons of the Jodhpur MS reads:—

“ १६६७ वर्षे । कर्त्तव्यमिच्छन्वन्दुर्दशं रचोद्वे । लिखितः सुरभवेन दशमस्कन्धे ॥
मधुसूदनभावेन लेखितोऽयं सुसुदिना । गारक्ष्यसुतेनैव गोविन्दस्यैव चित्रितः ॥ ”

1. Vide verses 19-20 of Chapter 31 of Skandha XI (*Bhāgavata*, Jagadishvar Press, Bombay, Śaka 1815 (= A.D. 1893)).

2. Vide M. R. Majumdar's article "The illustrated MS of *Ratirahasya* of the Gujarati School of Painting" (*Bom. Uni. Jour.*, Vol. V, Part VI, May 1937, pp. 134-144). According to Mr. Majumdar the "Gujarati School of MSS—Illustrations flourished from 12th to the 17th century after which it was more or less modified by Mughal and Rajput influences". Mr. Majumdar refers to the following studies on Indian painting:— (1) N. C. Mehta ("Indian Painting in the 15th century, an illustrated MS" [*Rupam*, No. 22-23 (April-July 1925)]); "Studies in Indian Painting", Ch. II, Secular Painting in Gujarat, 15th century (1926); "Gujarati Painting in the 15th century: A Further Essay on Vasant Vilās" (1931, London), (2) O. C. Gangoly: "A newly discovered illustrated Indian MS" (*Ardhra His. Res. Soc. Jour.*, Vol. IV, 1929); "A newly discovered illustrated Indian MS" (*Indian Arts and Letters*, Vol. IV, No. 2, New Series, 1930); "A newly discovered illustrated Indian MS (*Mālavīya Comm.* Vol. 1912). (3) Hiranand Sastri: "Indian Pictorial Art as developed in Book-illustrations", *G: Ahmad Archaeol. Series*, No. 1, 1936).

3. Prof. W. Norman Brown: "Early Vaishnava Miniatures, *Eastern Art*, Philadelphia, pp. 17-206 (1936); *Story of Kilaḡa*, Smithsonian Institution, Washington, 1933; *A Descriptive and Illustrated Catalogue of Miniature Paintings of the Jain Kalpa Sūtra*, Smithsonian. Inst., 1934; *Early Western Indian Miniature Painting at around 1400 A.D.* (*Journal of the Indian Society of Oriental Art*, 1935); "A manuscript of the 5th Skandha Sūtra illustrated in the early Western Indian Style (*New Indian Antiquary*, Vol. 1, 1938, pp. 127-129).

9. THE OLDEST DATED PAPER MANUSCRIPT OF VANGASENA'S CIKI'ISĀ-SĀRASAMGRAHA IN THE GOVERNMENT MANUSCRIPTS LIBRARY AT THE BHANDARKAR ORIENTAL RESEARCH INSTITUTE, POONA *

The history of Science has not received in India the attention which it has received in other civilised countries of the world. The history of medicine is an integral part of the history of science. India has contributed not a little to the history of medicine as vouched by numerous authoritative texts on Āyurveda like the *Carakasamhitā*, the *Suśrutasaṃhitā* and others, which have been the very basis of the theory and practice of the Āyurveda for more than 2,000 years. For an accurate history of any science like medicine, the history of the extant texts pertaining to it ought to be reconstructed. For this purpose the study of the dated manuscripts of these texts has been recognised as a reliable source by students interested in this subject. In my articles¹ pertaining to Indian Literary History, I have made an abundant use of the dated manuscripts of texts pertaining to the different branches of Indian Sciences. During the course of my study extending over four decades, I have noticed several dated manuscripts of Indian Medical and allied texts. It is worthwhile making a special study of them, as such a study would be useful not only to the students of Indian paleography but also to the students of the history of Indian Medicine, who are curious to know these sources of Indian medical history but are unable to secure them easily.

In the present note, I wish to bring to the notice of the readers of this Journal the earliest dated paper manuscript of a work on Medicine available in the Government Manuscripts Library at the Bhandarkar Oriental Research Institute, Poona. This manuscript bears No. 3:2 of 1879-80. It is dated Śamvat 1376 = A.D. 1320. In spite of the lapse of 636 years since it was written, the thick paper of the manuscript, even though musty in appearance, shows no signs of decay and can be handled without causing any damage to it. This condition of the manuscript may be contrasted with the sad condition of modern printed books, which within less than 50 years from the year of their publication, become brittle and are not fit for handling. The medical work represented by this manuscript is called *Vaṅgadatta Vaidyaka*

* *Indian Journal of the History of Medicine*, Vol. I, No. 2, pp. 29-32.

1. See Vols. I and II of my *Studies in Indian Literary History*, published by the Bharatiya Vidya Bhavan, Bombay, 1953, 1954, and Vol. III published by Prof. P. K. Gode Works Publication Committee, Poona 4, 1956.

but its correct name is *Cikitsā-sārasaṅgraha*. Its author's name is Vaṅgasena. I published a paper¹ on the date of this author, who is quoted profusely by Hemādri in his commentary on the *Aṣṭāṅgahṛdaya* of Vāgbhaṭa. The date of Hemādri is c. A.D. 1260. He was the minister of the Yādava Kings of Devagiri (Daulatabad) viz. Rāmacandra and Mahādeva. Jolly, the great German Orientalist, in his monumental history of *Indian Medicine* (English trans. by C. G. Kashikar, Poona, 1951, pp. 7-8) has made some remarks on Vaṅgasena and his present treatise. Some points from these remarks may be noted below :—

- (1) This very comprehensive work on medicine was published at Calcutta as early as 1884.
- (2) It contains a general introduction to pathology, and deals with duties of the physician etc., an exhaustive description of diseases and their treatment, the elixir and *Vājīkarṣa*, *Bṛmhaṇa*, *Svedana*, *Vamana*, etc., the dietetics and pharmacology, diagnosis and prognosis.
- (3) It says nothing about the calcination of metals. *Nāḍīparīkṣā* is not mentioned and no reference to opium is found in it.
- (4) It mentions three kinds of iron and six kinds of steel.
- (5) It speaks of properly purified quicksilver, the *Rasaparpoṣa* (a preparation of quicksilver) and other mercurial mixtures but does not enter into the particulars of the methods of working upon mercury.
- (6) Vaṅgasena was the son of Gadādhara. He hailed from Kanjika. He was a Bengali, being contemporary of the Sena dynasty of Bengal.
- (7) Many recipes given by Vaṅgasena are identical with those in the Bower MS. Others can be traced to Vṛnda and Cakradatta (c. A.D. 1060).
- (8) The oldest MSS of Vaṅgasena's work are dated A.D. 1276 and 1320.

The MS dated A.D. 1320 mentioned by Jolly is identical with the MS in the Government Manuscripts Library at the Bhandarkar Oriental Research Institute. I reproduce along with this note, photos of its first page and the last page recording the date of its copying viz. *Saṃvat* 1376 (= A.D. 1320).

As regards the other MS of this work dated A.D. 1276 mentioned by Jolly, I have to record the following information given by Dr. Julius Eggeling on p. 952 of his *Catalogue of Sanskrit MSS in the India Office Library*, Part V, London, 1896 :—

1. See pp. 325-333 of my *Studies*, Vol. I.

The Cambridge Library possesses two portions of Vaṅgasena's work. The date of this MS is *Nepal Samvat* 396 (= A.D. 1276). Though this MS is called *Vaidyavallabha* Eggeling thinks that it is substantially the same work as the *Cĳikĳitĳā-sĳārasamĳgraha* of which there is a MS in the India Office Library, which Eggeling has described on pp. 951-952 of his Catalogue. Eggeling states that Vaṅgasena is earlier than A.D. 1200.¹ I shall feel thankful if the readers of this Journal bring to my notice any earliest dated manuscripts² of medical works noticed by them in private or public MSS collections.

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1. Shri D. K. Shastri assigns Vaṅgasena to "about A.D. 1200" (see p. 182 of *Ayurvedno Itihāsa*, Ahmedabad, 1948).

2. See my paper on *Notes on the MSS of Medical Works by Jain Authors (Jaino Antiquary, July 1947, Vol. XIII, No. 1, pp. 1-8)*.

10. SOME ANCIENT INDIAN OBSERVATIONS ON STUDY (ABHYĀSA)*

We live in the modern age with so many facilities for study such as well-equipped libraries and reading rooms, polished reading desks and chairs which keep the spine of the student erect, well trained school teachers and highly qualified professors, capable of delivering lectures in their subjects for two hours without a break in a stentorian voice, many study circles in our educational institutions and outside, films educational or otherwise which provide visual aid to study, social gatherings and other entertainments which keep the students in a good frame of mind and last but not least the plethora of cinema theatres and restaurants which provide incessant excitement and vitality respectively to the youth of a nation. In spite of this wealth of facilities our school teachers complain that their students never study at home. Our professors tell us that the students in their colleges have a greater fascination for the girl students (where such a facility for study has been fortunately provided by the college authorities) than for their lectures, howsoever painstaking and laborious they may be. Fifty per cent. of the study in colleges is done by the professors, twenty-five per cent. is done by the annotators and twenty-five per cent. is left to the students.

Leaving aside the exceptional cases of clever students who are capable of passing their examinations creditably with the least help from their teachers we find a majority of our college students trusting in Providence for success in their examinations. Trust in Providence by all means but one must know that Providence is immanent in the universe of which all of us are a part. All human effort is ultimately divine and our studies, if carried on with a divine fervour are bound to succeed. "Study gives strength to the mind" said an English author. The more conscientiously we study the greater is the strength of our mind, which produces confidence in our abilities. All confidence is life-giving and creative. It is a wonder worker.

"Study the past if you would divine the future" said Confucius, the Chinese law-giver. Our ancestors were ideal students and teachers. The wealth of Sanskrit literature which has survived the onslaught of time and which has raised us in the estimation of foreigners is a creation of these students and teachers of Indian antiquity. We are, therefore, curious to know if these students and teachers have left any observations on *Study* or *Abhyāsa* which may serve as a guide to the modern students.

* *The College*, 1949, pp. 13-14.

While engaged in preparing a complete Bibliography of my research papers published during the last 33 years of my post-graduate research career, I came across incidentally the remarks on the value of study, (*abhyāsa*) in the *Yogavāsishtha* (*Uttarārḍha, Nirōḍaparakāṣa*, Chap. 67). These remarks penetrated the depth of my soul as they have been borne out remarkably by my experience as a student of Indology for over three decades of my service as Curator of the Bhandarkar Oriental Research Institute, Poona. I implore all earnest students to ponder over these remarks of the *Yogavāsishtha* and realise their truth for themselves. I record below some of these remarks which will reveal to the modern students not only the value of *abhyāsa* but also the wisdom of our seers of antiquity in recording their experience for the benefit of posterity :—

Shakespeare observes in his *Love's Labour Lost* : "Study is like the *Heaven's Glorious Sun*". The *Yogavāsishtha*, which was composed a thousand years before Shakespeare, also refers to *Sun of Study* (*Abhyāsa-bhāshaka*) and its powers of illumination as follows :—

"The *Sun of Study* is alone victorious in illuminating all objects for the entire world of living beings."

"*Abhyāsa* is nothing but *repeated application*." "A person can attain success (*Siddhi*) by his own effort (*Yatna*) arising out of his own urge. This effort is known as *Intensive Study* (*dṛḍhābhyāsa*)."

"By constant study one can obtain even unattainable objects, convert enemies into friends and transform poison into nectar." "One cannot do without study in this world as it is the central object of human life (*Puruṣārtha*)."

"One can attain peace of mind only by a profound pursuit (*Ghaṇābhyāsa*) of one's ideal."

"He is the meanest wretch, who abandons the study or pursuit of his objective."

"Fortunes may prove abortive but never so study (*Abhyāsa*)."

These are some of the observations of the *Yogavāsishtha* on study at high altitude and they stand in glaring contrast with Bacon's utilitarian observations on study such as :

"Studies serve for delight, for ornament, and for ability" and "Studies perfect nature and are perfected by experience."

The *Yogavāsishtha* teaches us how to pass creditably the examination of life of which the University examinations are only an insignificant part. In fact it exhorts us to study hard if we want to come out victorious in the test of *Puruṣārtha*.

The *Mahābhārata*, our great epic, also emphasizes the importance of *Abhyāsa* or study. All study to be successful requires control of the mind. The *Gītā* admits the wayward character of the mind and the difficulty of controlling it but asserts that it can be controlled by *abhyāsa* (study). According to the *Sāntiparvan* (Chap. 327, 48) the success in the acquisition of knowledge is exactly proportionate to the degree of intelligence (*mati*) and the intensity of study (*pāṭha*). We are further told in this *parvan* of the epic (Chap. 130, 10) that a student develops a taste for a close knowledge (*vijāna*) of a science (*Śāstra*) as he actually acquires such a knowledge by a constant application to it.

The foregoing observations on the value and nature of study recorded by our ancestors hundreds of years ago serve as a beacon-light to all serious students of the modern age. In fact they are true for all times and climes. If we ponder over these observations in a spirit of reverence we are bound to get from them a new hope and a new confidence which will fortify us in all our struggles for a sane and successful life.

11. HISTORY OF THE RANGAVALLI (RĀNGŌḌI) ART BETWEEN c. A.D. 50 AND 1900*

I propose in this paper to record some references to the *Art of Decorating Floors with Coloured Powders* on festive occasions as current in some parts of India.¹ This art is practised by the women-folk and occasionally in some Hindu temples its exhibitions are held on the occasion of a festival. It is necessary to trace the history of this popular art on the strength of Sanskrit and non-Sanskrit sources with a view to giving it a proper historical perspective. In Mahārāṣṭra this art is known by the term "रंगोळी" (*rāṅgōḷi*). Accordingly in the Marathi Dictionary called the *Śabdakośa* by Y. R. Date and C. G. Karve we get the following entry about it:—

Page 2604 — "रंगोळी रंगवळी" = Powder of rice or other materials prepared for the purpose of drawing various designs before deities on the occasions of feasts etc.

Usage — "सिखा रंगवळी स्त्री राणिपा । चकवर्तीचिर्जा ।"

—सिधुपालवच,² ५९१

— "रंगोळी करणे" = To kill, to destroy completely etc.

Usage:— "ठेवून करी रंगोळी"

—संघाम ११

Etymology:—[Sanskrit रंज = to dye, रंगवळी, रंग + वळ]

— "रंगोळी होणे" = to be completely destroyed.

—मोरोपंत³ —विवाटपर्व ४-३३

— "रंगोळे" = A perforated cylinder filled with रंगोळी used for drawing floor decorations by moving it over the floor.

As the term "रंगवळी" is used in the *Mahānubhāva* poem *Sīsupālavadhā* of c. A.D. 1273 we are warranted in presuming that this art of drawing *rāṅgōḷi* pictures has been current in Mahārāṣṭra clearly from about A.D. 1200.

* *Annals* (B. O. R. Institute), Vol. XXVIII, pp. 226-246.

1. See *Bombay Gazetteer*, Vol. XXII (Dharwar), Bombay, 1884.—Appendix D (by Rao Bahadur Tirmalvar Venkatesh) on *Quartz-Powder (Rāṅgōḷi)*—Pages 821-823—*Rāṅgōḷi*, the word used for the quartz lines and pictures which prudent housewives sprinkle in front of their house-doors is said to mean the brilliant line from the Sanskrit *rang* colour and *ḍālī*, a row. The orthodox explanation of the sprinkling of these lines and figures, as well as of white-washing, cow-dunging and tying strings of mango leaves in houses, is that it is for beauty, because god dwells in the house.

2. This old Marathi poem *Sīsupālavadhā* was composed by Bhānubhāṭ or Bhāskarabhāṭ Borikar (c. A.D. 1273, see p. 58 of the *मध्ययुगीन चरित्रकोश* by Chitro Sastri Poona, 1937).

3. The Marathi poet Moropant flourished between A.D. 1729-1794 (see page 660 of *म. च. कोष*).

The *Sabdakola* (p. 2579) records another term for this art viz. "रंगमाळा" and explains it as "रंगोळीची चिन्ने" (*rāṅgoḷī* decorations) or "रंगोळी" (powder). The usage of "रंगमाळा" as given by the *Sabdakola* is as follows :—

"मघसोनि गृहकामी रंगमाळा घालूं पाहती"

—मृदाळी घनहवामाची २०-२

As the above usage is not very old I record below a usage of the term "रंगमाळा" in the *Mahānubhāva* Marathi work श्रीकापरित्र (c. A.D. 1250) माग २, पृष्ठांशे संख २, ed. by H. N. Nene, Nagpur, 1937 :—

Page 68 — "मग तेही सवासंमार्जनः चौक रंगमाळीका भरवोलीयाः गुथी उचरिचीः उपहाराची भावति करिचीः भापण घोडे वेडनि साठमे भाडेः मागी जेट जाकी"

Page 37 — "मग बीळीचा वेडो बाछंजाचेयां परां बीजें केळेंः बाछंजें सवासंमार्जन केळेंः चौक रंगमाळिका भरिलीयाः"

Saint Rāmadāsa (A.D. 1608-1682) refers to "रंगमाळा" as follows :—

"गृहसीधने इदावने । सुंदर सडे संमार्जन ।
घोडे रंगमाळा भासने । ठाई ठाई ॥ २ ॥"

—मानवपूजा, *Prakarṇa* 1 (p. 339 of रामदास-समग्र ग्रंथ, Poona, 1906).

We have so far recorded the following datable usages from the Marathi literature about *Rāṅgoḷī* :

- c. A.D. 1273 — "रंगवळी."
- c. A.D. 1250 — "रंगमाळी(छि)का."
- c. A.D. 1650 — "रंगमाळा."
- c. A.D. 1750 — "रंगोळी."

I shall now record the evidence of Sanskrit texts about *rāṅgoḷī* decorations :—

In the *Ahājābhairavakalpa* (MS No. 43 of 1925-26 at the B. O. R. Institute, Poona) which appears to have been composed between A.D. 1400 and 1600 we find the following references to *rāṅgoḷī* or *rāṅgoḷī* :—

1. We must see at what time the use of such mechanical devices for drawing *rāṅgoḷī* pictures on the floor came into vogue.
2. In this passage we get a description of the manner in which Gosāvi (Cakradhara, the founder of the Mahānubhāva Sect) was received by a devotee. The ground in front of the house was sprinkled over with water (mixed with cow-dung). This ground was then decorated with *rāṅgoḷī* drawings etc.
3. This is a description of the manner in which a Brahman received Cakradhara. In this description also we find (1) सवासंमार्जन (sprinkling of water mixed with cow-dung on the ground) and (2) रंगमाळिका (the drawings of *rāṅgoḷī* on the ground so prepared). These practices are current even today in Maharashtra on the occasions of fests and festivals.

Page 391 — *Pañjala* 110—“ दृत्त्वात्तामिस्ररूपमिदं कुर्यात् ” — Description of an altar (वेदि).

—“ सुशिक्षिता कारयिष्या वेदिं कुम्भारिचं विधे ।
उपयिष्या गोमयेन रङ्गवर्णान् समन्वतः ॥ ”

(the ground near the altar was smeared with cow-dung and rāᅅgō]l decorations were drawn on it).

Page 377 — *Pañjala* 108—“ नानावङ्गनस्यान्तिविधानम् ” — Description of वेदि.

—“ गोमयेन विलिप्सोर्वा रंरावङ्गी विद्याय तु ”

Page 316 — *Pañjala* 92—“ नृपदृष्टामिषेकाङ्गनपद्मम् ” — Coronation pavilion decorated with (drawings with) powders of five colours on the ground smeared with water mixed with cow-dung.

—“ कारयिष्या गोमयेन उपयिष्या सचारिष्या ।
पंचवर्णैरजोमिस्तं जलं कुर्यात् तु मण्डपम् ॥ ”

Page 292 — *Pañjala* 85—“ नृपामिषेककर्मस्य मण्डपवेदिम् ” — Altar in the coronation pavilion.

—“ एवं कुंभं वेदिकां च कारयिष्या सुशिक्षिभिः ।
उपयिष्या गोमयेन रजोमिः पंचवर्णैः ॥
जलंकृत्य पुरोधास्तदामिषेचनिकञ्चिद्वनम् । ”

(Powders of five colours to be used for decorating the ground besmeared with cow-dung).

Page 215 — *Pañjala* 66 —“ कुमारोद्वाय-वस्वरूपकथनम् ” — This *Pañjala* specifies the forehead-marks (तिलकानि) and seats (आसनानि) for the worship of unmarried girls of different castes (during the *Navarātri* festival).

Tilakas :—

- (1) ब्राह्मणी — चतुरस्रतिलक of चन्दन
- (2) क्षत्रिया — अष्टचन्द्रतिलक of कुकुम्भ
- (3) वैश्या — ऊर्ध्वतिलक of चन्दन and जगह
- (4) शूद्रा — चतुर्भुजतिलक of कस्तूरी and चन्दन
- (5) जन्त्यजा — वेदिमण्डपतिलक of रक्तचन्दन

Āsanas :— Powdered rice is to be used for marking on the ground different seats for different girls. These *āsanas* are of different patterns :—

- (1) अष्टपत्र — Having eight petals.
- (2) षड्भुज — Hexangular.
- (3) त्रिकोण — Triangular.
- (4) चतुर्भुज — Having four petals.
- (5) चतुरस्र — Quadrangular.

(2) The association of रंगबह्नी with वेदि or sacrificial altar i.e. for decorating the ground round this altar.

(3) Use of रंगबह्नी for decorating the ground with powders of five colours (पञ्चवर्णरजोमिः) at the King's coronation.

Ācārendu (A.D. 1438) of Tryambaka Māte (A. S. S. Poona, 1907) refers to the use of शिलाचूर्ण for drawing *Svastika* and other marks¹ in temples :—

Page 175 — पारिजते—

“ शिलाचूर्णेन यो मर्यां देवतायतने नृप ।
 क्रोति स्वस्तिकादीनि तेषां पुण्यं निशामय ॥
 यावत्पथः कणिका भूमौ क्षिप्ता त्विच्छुभोन्नव ।
 तावद्युगसहस्राणि हरितालोत्थमवदुते ॥ ”

The *Pārijāta* also refers to समाजंन and उपलेपन with गोमय and other materials as follows :—

“ देवतायतने राजन् ह्रवा समाजंन नरः ।
 यत्फलं समवाप्नोति तन्मे निगदतः शृणु ॥
 यावत्पथः पांसुकणिकाः सम्यक्समाक्षिता नृप ।
 तावद्युगसहस्राणि विष्युलोके महीपते ॥
 मृदा धातुविकारैर्वा वर्णकैर्गोमयेन वा ।
 उपलेपनरूपस्तु नरो वैमानिको भवेत् ॥ ”

(शिलाचूर्ण referred to above may mean मनःशिलाचूर्ण i.e. red arsenic powder. It may also mean "stone-powder." At present *rāṅgoṣī* powder is prepared from white stone pebbles or quartz).

In the *Varāṅgarita* (7th century A.D.) of Jaṭāsirhanandi (edited by Dr. A. N. Upadhye, Bombay, 1938) we get a reference to the use of different powders, flowers, and rice for decorating the ground with different designs on the occasion of a *bali* at night (रात्रिबली) as will be seen from the following verse 15 of canto XXIII (p. 221):—

“ चूर्णैश्च पुनैरपि तपहुलैश्च दद्याध्वर्णैर्बलिर्कर्मयोगैः ।
 नानाहृतीस्तत्र बलीग्निषिद्धा भूमिप्रदेवो रथपावन्नृपुः ॥ १५ ॥ ”

(दद्याध्वर्णैः = of five colours). The use of powders of five colours mentioned in the above verse may be compared to the use of such powders (पञ्चवर्णरजोमिः) for decorating the grounds at the king's coronation mentioned in the *Ahātābhairavakalpa* (*Paṭala* 92).

1. *Aparāṅka* (c. A.D. 1100 on *Yājñavalkyaśruti* (Ānandāśrama, Poona, Vol. I, 1903, p. 147. पृष्ठस्वधर्मप्रकरणं) quotes the following lines from *Baudhāyana* which refer to उपलेपन of the ground and the drawing of diagrams on it :—

“ बीधायनः— उपलिप्ते समे स्वाने शुचीं ऋग्मसमन्विते ।
 चतुरश्रं त्रिकोणं तु बतुलं चार्धवन्नप्रम् ॥
 कसम्भमानुपुर्व्येन ब्राह्मणादिषु मण्डलम् । ”

In Vādībhasiṅha's *Gadyacintāmaṇi* (ed. by T. S. K. Sastri and S. S. Sastri, Madras, 1902) we find a reference to "मङ्गलचूर्णे रेखा (drawing with some red powder) on the ground of a dining pavilion (भोजनस्थानम्) as follows :—

Page 38— "हृत्स्येविसत् । उच्यते प्रसार्यमाणसौषर्णाग्नयिद्विद्वितमित्रवन्द्ये, त्वेमान्परिव्रजयन्तिताकरप्रसूज्यमानमग्निश्चपञ्चुकिर्सचये, संसृष्टंस्तुक्काद्वपरिमलुत्तुचिपानीचमरिष्ठतपनीपञ्चकारके, लिख्यमानमङ्गलचूर्णे रेखातिपैः मानभोजनमुचि, समुदाटितपञ्चकवाटविनिर्गतकीडाग्न्युक्सारिकाहृत्पमानौषेगये, वपेष्यमानवृक्षितवने, प्रदीपमानपङ्क्तिभोजनामचक्रलोपये, प्रत्येवरात्रनितसोरम्यत्स्यद्व्याये, समन्तद्वलिततलहृत्सप्राहिणी चरणपुररभिधमतिदिशि, भोजनस्थानमन्वये.....वाञ्छन्मसमायुषप्रस्तमवद्वयत् । "

In the above passage we get a very colourful picture of a royal dining pavilion, which can be compared with any dining pavilion of Indian princes of to-day. With the exception of gold dishes and cups referred to in the above passage the dining pavilions used at our common modern marriage and muñja ceremonies are exactly similar to that described so vividly by Vādībhasiṅha more than a thousand years ago. According to the editors this author is later than c. A.D. 650 as he imitates *Bāṇabhaṭṭa*, the author of the *Kādambarī* etc. He may be even later than Bhoja (c. A.D. 1050)—(see pp. 4-5 of Introduction to *Gadyacintāmaṇi*). *Rāṅgoli* drawings are clearly referred to by Vādībhasiṅha as one of the features of the dining pavilion "मङ्गलचूर्णेरेखातिपैःमानभोजनमुचि").'

1. I may record here the use of *Rāṅgoli* as recorded on pages 821-822 of Vol. XXII (Dharwar) of the Bombay Gazetteer, 1884 (Appendix D) :—

"The best *Rāṅgoli* is made by pounding white quartz into powder. Its colour is white and it may be used either while the Brāhmins are in a pure state after bathing, or when they have not bathed. In the absence of quartz-powder rice-flour may be used. In addition to the white lines, dots or figures of yellow, red, black, green and blue powder are also occasionally used. The yellow powder is made from turmeric, the red is the ordinary gull of rice or red flour dyed with red sanders, the green is from the ground dried leaves of the *Aschynomene grandiflora*, the black charcoal, and the blue is indigo. Every day lines, dots and figures are drawn on the floors of all Brāhmin houses, three, four or five straight lines, parallel to the walls of rooms and verandas. Cross lines, circles with dots in the centre and elaborate figures are also drawn. On great occasions elaborate tracery and figures of men, animals and trees are also drawn. On *Nāgōr-chōr* or the Cobra's Fourth, that is the bright fourth of *Śrāvān* or August-September, Brāhmins, in addition to making the usual figures, draw and worship single, double and twisted forms of snakes sprinkled in quartz-powder. During the leading days of the *Diētī* (fast the dark 14th and 15th of Āśvin or October-November and during the bright half of *Kārtīk* or November-December, all Hindus set what they call the *Pandus* five cow-dung cones, two or three inches high and about the same round the foot, outside to the right and left of the threshold, and on the top of the outer house-door. Round each cow-dung cone they draw double or treble white and red lines, set a flower of the *Aumbal* (K), *sunbha hispida* gourd on each of the cow-dung cones and throw over all turmeric and red

Before proceeding further with references to *Raᅅgavalli* in datable sources I may consider here the observations on the position of the *Raᅅgavalli* pictures in the field of Indian art as made by the extant texts on this subject. In this connection I cannot do better than quoting below in extenso the remarks of my friend Dr. V. Raghavan from his article on *Some Sanskrit Texts on Painting* (Indian Historical Quarterly, Vol. IX, 1933, pp. 899-911):—

Pages 905-906 — "The *Abhilaᅅtārthacintāmaᅅi* (of King Somēvara c. A.D. 1130) gives five varieties of pictures:—*विद्, अविद्, मर्वाचित्र, रसचित्र* and *पुष्पचित्र*. Of these the *Bhāvachitra* stands by itself and is of the greatest importance. It has been explained above that *Bhāvachitra* is the picture depicting emotion. The *Rasachitra* and *Dhūlicitra* go together.

The *Dhūlicitra* is the Tamil *Kolam* done with white flour on the floor and in front of our houses. In the month of *Mārgaᅅᅇᅇᅇ*, Tamil girls vie with each other in the villages to draw the biggest and the most intricate *Kolams* in front of their houses and then decorate these *Kolams* at various points with pumpkin flowers. On more festive occasions, in the houses, temples and Tambalams (i.e. brass plates used in our houses) for *Nirājana*, these *Kolams* are done with various coloured powders. These *Citras* are naturally *short lived*. So it is

powder on the marriage-day of Viᅇᅇᅇ and the Tulsi plant that is the evening of the bright twelfth of Kārtik or November-December, and when Lakshmi, the goddess of wealth comes in Shrāvan or August-September, besides the usual quartz figures, gopad or cow's foot-prints are sprinkled with redge.1 powder all along the ground from the outer threshold of the house to the shrine which has been made ready for the god.

When *feasts* are given in the open air, in front of and on each side of the board on which each guest sits, *lines and arches* are drawn in quartz and red powder. On *birth, marriage* and other festive occasions and when *entertainments* are given, elaborate quartz-powder figures are traced. On occasions of *deaths, funeral ceremonies, yearly mind-rites or mind-dinners*, no quartz lines, dots or figures are drawn, except that at *dinners in honour of saints* a little quartz-powder is occasionally used. No special quartz-figures are drawn on no-moon or full-moon days. The *cow-dunging* of the ground and the *drawing of fearful quartz-powder figures* is an important part in most *exorcisms*.

The great tracers of quartz-powder figures forming them simply by letting the powder drop from between the thumb and fingers are Brāhman women. No Brāhman woman during her monthly sickness, for three months after child-birth, or when in mourning may draw quartz lines. *Jains* use Raᅅgoli like Brāhmins and *Mardhas* use it on special occasions. Some, but not all *Lingyats* draw a few lines every day in their houses. On moon-light nights and on great occasions *Lingyats* draw long double *lines of dots, alternately of lime and water and red earth and lime and play close by these lines. Lingyats* also draw once or two lines of quartz-powder along the edge of the grave, before burning the body. *Paris*, like Hindus, decorate their house fronts by stamping them with quartz-powder plates. *Musalman* and *Native converts to Christianity* are the only persons who do not use quartz decorations. Formerly the traceries were all made by letting the powder slip between the thumb and fingers. Of late years *tubs and plates with upturned edges pierced with designs* have been filled with powder and either rolled or stamped over the place to be decorated."

that Śrī Kumāra (author of the *Silparatna*) calls them "कणिका" (*Kaṇika*). Since these are drawn more especially on the floor, Nārada calls this variety of Citra as "भूमि" i.e. of the floor. Śrī Kumāra describes them thus :—

“पुताम्बनस्यवर्णनि चूर्णयित्वा द्रव्यं द्रव्यम् ।
(५) केश्मीः स्यन्दिते रम्ये क्लृप्तकानि विद्येययेत् ॥
धूलौचित्रमिदं ज्ञातं चित्रकरीः पुरातनैः ॥”

—*Silparatna*, XXXVI, *Śloka*s 144, 145.

Rasacitra (रसचित्र) is another variety of *Kolam*. One must not be misled by the word *Rasa* in रसचित्र and take it with भावचित्र. The word रस here means द्रव (*drava*) or coloured solution. The *Abhilaṣitārthacina*, *maṅgi* thus defines it :—

“सदृशैर्गर्भैः केचन रसचित्रं विवक्ष्यते ॥”

This kind of *Kolam* is also drawn in some Tamil houses. *White flour-solution* and *red Kavi-solution* are employed and are called in Tamil *Maucukolam* and *Kavikkolam*. The former is drawn in wavy lines. Thus रसचित्र is also a kind of *Kolam*. While चूर्ण or powder is employed in पृष्ठचित्र, *drava* (द्रव) or solution is employed in रसचित्र. (The *Mahara* and other coloured designs drawn on the cheeks and busts of damsels according to the *Kāvya*s belong also to this category of रसचित्र). Therefore it is held by Śrī Kumāra that like पृष्ठचित्र and लि (i.e. Sculpture) etc. the रसचित्र also is not for the walls :—

“बुधापचक्षिते मितौ नैव कुर्याद्विदं सुधीः ।
रसचित्रं तथा धूलौचित्रं चित्रमिति विद्या ॥”
—*सिम्परत्न* (*Śloka* 143)

Thus Painting and half-visible reliefs, चित्रामास and गर्भचित्र are the two that are done on the walls. These facts are not taken into consideration by Dr. A. K. Coomaraswamy. Consequently he connects (vide p. 50 of Part I of *Ashutosh Mukerjee Comm. Volume*) the वैशिक of the *Viṣṇu-dharmottara* with the रसचित्र of Śrī Kumāra and says that both are identical. Surely रस also means emotion and emotion is associated with कौण्डिन्या, from which is derived by him the वैशिक type. But when one sees the clear definition of रसचित्र given by *Someśvara*, from whom Śrī Kumāra borrows his knowledge, one will rest assured of the fact that रसचित्र is another kind of *Kolam* related to the पृष्ठचित्र, the word रस here meaning द्रव.”

“Chapter 71 of *Nāradaṭīlpa* (Adyar MS) is devoted to the decoration of painting, चित्राच्छकृतिरचनार्थविधिक्रमन. Pictures are not only for the

1. Vide p. 8 of Intro. to *Viṣṇu-dharmottara* (Part III) Trans. by Stella Kramrich, Calcutta University Press, 1928 — “From the *Silparatna*.....we know that *Dhūlitika*, powder-painting familiar to Bengal ladies as *Alpna*, was applied as temporary coating of powdered colours on a beautiful piece of ground.”

joy of the gods and the presiding deities of the buildings, Vāstunāthas, but also for *beauty* according to *Uśīnara*. Nārada gives a new kind of classification of pictures, not found in other works, and it is from the *point of view of the places, where the pictures are drawn*. Thus he says that pictures are of three kinds—(1) *of the floor*, (2) *of the wall* and (3) *of the top* i.e. ceiling (मीम, कुञ्जक and ऊर्ध्वक). These again are classified from another stand-point into two kinds, the *permanent* and *temporary* (साधनक and तात्कालिक). The latter is the मीम i.e. the picture of the floor; *Kolam*, the *Dhūlicitra* and *Rasacitra* of Someśvara belong to this class. Nārada says that this variety is drawn, in front of the house, on the door-step, on the pials and everywhere in the house on the floor. *Birds, snakes, elephants, horses etc. can thus be drawn*. These themes are still drawn¹ in our houses."

Trivikramabhaṭṭa (A.D. 915)² in his *Nalacampū* or *Damayantīkathā* (ed. by Shivadatta of Jaipur, Bombay, 1885, p. 140) refers to "रङ्गवलि" in *Ucchvāsa* IV as follows :—

"इवासास्य विद्यान्तायां विद्यद्वापि स्थिरा च किंचित्कलोचितपरिचिति
गतेषु कणावन्तर्धनं मुनिषु 'समुपस्थीयन्तां वैजयमयः, बभ्रवन्तां तोरनानि, सिच्यन्तां
चन्द्रनाम्भोमिः पन्थानः, अण्डयन्तां वसुधुक्ताच्छतोदरङ्गावलिमिः प्राङ्गणानि,
किपन्तां कुसुममकरमात्रि कारवराणि, पूज्यन्तां द्विजमानो देवताश्च, दीपन्तां दानानि,
गीपन्तां मङ्गलानि, विद्युज्यन्तां वैरिचन्दाः, मुच्यन्तां पक्षिणोऽपि पञ्जरैः" इति
ख्यमाणेषु परितः परिजनात्तापेषु etc. "

The Digambar Jain author Somadeva in his celebrated work *Yaśastilakacampū* (A.D. 959)³ refers to "रङ्गवली" as pointed out by Dr. V. Raghavan in his article on "Gleanings from Somadevasūri's *Yaśastilakacampū*" (p. 255 of *Journal of Ganganath Jha Research Institute*, Allahabad, Vol. I, Part 2, February, 1944). Dr. Raghavan remarks :—

Page 133 — "पर्यैस्तपाद्वैः संपादितकुसुमोपहारः अक्षररङ्गावलिः (रङ्गवलिः) इव
गुहापरितरेषु "

This is a reference to the temporary floral designs drawn with white and coloured powder by our women-folk, for decorating the floor and called *Raṅgavalli*, *Rāṅgoli*, *Alpanā* or *Kolam* (Tamil).

1. Prof. C. V. Joshi, Raj Daftardar, Baroda, writes to me on 6-12-1947 :— "I have not met with any description of *Rāṅgoli* in the Pali texts. *Rāṅgoli* is called *Sāṅgi* (सांजी) in Gujārat. *Sāṅjitūḍḍe* (सांजीतुंडे) is the name of a Deccani family here (at Baroda), whose duty is to arrange *Rāṅgoli* in the Palace."

I record my best thanks to Prof. Joshi for the above information. I hope some Gujāratī scholar will record all possible information about *Sāṅgi* from the Gujāratī literature, early or late, especially from datable texts.

2. Vide p. 332 of *History of Sanskrit Literature* by A. B. Keith, 1928.—Trivikrama is the author of Navsari inscription of Rāṅgākūṭi king Indra III of A.D. 915.

3. *Ibid* p. 333.

According to the Sanskrit Texts on painting this is called *Karpāśa-Citra* and is classified into *Dhūlicitra* (with dry powder) and *Rasacitra* (with coloured solution).

Three other references to this *Raṅgavallī* on the floor are to be found on pp. 350, 369 and Pt. II, p. 247 :—

(a) — “ कर्पाशकणं दक्षस्य रङ्गवलिपदान्ते ” (p. 350)

(b) — “ कर्पाशकणैर्दशमपरिर्कस्यवरङ्गावलिविधानम् ”

— A description of the court-hall where the white *Karpāśa* (Campbor) dust is used for the drawings (p. 369).

(c) — “ कल्पवस्तुष्ठिते रङ्गवलीमयीं च कसहमानवा । ”

This is a reference to such designs worked permanently by fixing coloured stones on the floor in the queen's apartment.

For a fourth reference see *Part II*, p. 247 :—

“ रङ्गवलीं च रचयामासवन् ”— which speaks of “devising a ground which should set off the design.”

Hemacandra (A.D. 1088-1172) in his *Deśināmamālā* I, 78¹ mentions the word “साहस्यम्”, which means *Rāṅgoḷī* decoration and occurs in the following line :—

“ साहस्यम् च विदुः कल्पवस्तुम् सुधाकण्ड च । ”

Hemacandra explains :—

“ साहस्यम् विदं तस्मिन्ने रङ्गवस्तुवार्धं सुधाकण्ड च । तन्मुक्तपिच्छीरं रङ्गवस्तुवन् साहस्यम् इति ज्ञान्ते । ” (vide p. 38 of *Deśināmamālā*—B. O. R. Institute, Poona, 1938). In the *Glossary*, p. 7 the editor explains साहस्यम् as follows :—

“ साहस्यम् i, 78 विदम्, a ground substance;

“ तस्मिन्ने रङ्गवस्तुवार्धं सुधाकण्ड, White wash.

तन्मुक्तपिच्छीरं रङ्गवस्तुवस्तुवन्ने । ”

It is clear from the above reference that in Hemacandra's time the term “साहस्यम्” meant some “ground substance” as also “whitewash used for beautifying the house on a festive occasion.” This term also meant “a solution of a rice-flour used for decorating the house.”

1. I owe this reference to my friend Shri B. C. Deb of Calcutta who writes on 1-12-1947 :—

“As regards *Rāṅgoḷī* :—Yes, that is also the practice in Bengal, as indeed, I believe everywhere among Hindus in India. In Bengal it is used not only in floor-decoration, but also in decorating wooden seats for bride and bride-groom and for honoured guests at ceremonies and stands for images in *prājñā*. In Bengal it is called *রাঙ্গোলী* or *সাহস্য* which carries us back to Hemacandra's *Deśināmamālā*, I, 78, where the word occurs as साहस्यम्..... I think the word is not really *dali* but a *udmā* from साहित्यम्.”

Arhaddāsa (c. A.D. 1250) ¹ in his *Munisuvrata-Kāvya* (edited by Pt. K. Bhujabali Sastri and Pt. Haranath Dvivedi, Arrah, 1929) refers to "रङ्गालयः" (*Rāṅgoli* designs) made of five different jewels and drawn in the court-yard of each house on the occasion of the birth of Jinendra as will be seen from the following verse 23 of canto IV :—

Poje 80 — "प्रसङ्गो कल्पितं चारुन रङ्गालयप्रकुरनेकमंगाः ।

त्रिनेत्रप्रभाससरण्यप्योपरस्ततश्चतुर्धिसौक्यम् ॥ २३ ॥ "

The commentary on this *Kāvya* explains this verse as follows :—

"चतुर्धिया (चनेक मंगाः) रङ्गालयः (रङ्गालयः) पञ्चरत्नैः² कृताः मंगलमंगलं प्रति कल्पिताः त्रिनेत्रप्रभाससरे चित्तवृत्तं मेघः (पयोधरः) तस्मात् क्षसं चतुः तस्य संदेहं (विशंकां) चक्रुः ।"

(The five-coloured *Rāṅgoli* designs presented the appearance of a rain-bow dropped on the earth by a vanishing cloud on the occasion of the birth of Jinendra.)

In my search for the history of *Rāṅgoli* designs the earliest reference so far recorded by me is that found in the *Varāṅgacarita* (7th century A.D.) XXIII, 15, which mentions the use of five-coloured (वसार्धवर्णैः) powders (वर्णैः), flowers (पुष्पैः) and rice-grains (तण्डुलैः) for drawing various designs on the ground (भूमिभूमे नानाकृतीन् रचयाम्यनुभूतः). This reference of the 7th century A.D. can be linked up with one of the 64 arts mentioned in the *Kāmasūtra* of Vātsyāyana (between c. A.D. 50 and 400). This art is designated in the *Kāmasūtra* as "तण्डुलकुसुमवर्णविकाराः" (vide p. 32 of *Kāmasūtra* ed. by Kedarnath, N. S. Press, 1900—साधारणवर्णिकरणम् Chap. 3). The commentator Yaśodhara in his *Jayamaṅgalā* commentary (p. 34) explains the above art as follows :—

"तण्डुल—कुसुम—वर्णविकारा इति । मखण्डतण्डुलैः नानावर्णैः सरस्वतीभूमे कामदेवमयने वा मणिकुट्टिभूमे भक्तिविकाराः । तथा कुसुमैः नानावर्णैः प्रयितैः शिखरिङ्गादिपूर्यार्थं भक्तिविकाराः । अत्र प्रयनं मास्यमयनं पद्मान्त-मैतम् भक्तिविकारेण लवस्पापनं कटाक्षतरम् ।"

1. Arhaddāsa refers to Āśādharma in the *Munisuvrata-Kāvya*, and also in two other works composed by him viz. *Purudena Campū* and *BhooṅkaṅkajhāMaraga*. This Āśādharma was the Guru of Arhaddāsa. As the date of Āśādharma is about Samvat 1300 (= A.D. 1244) we may reasonably conclude that Arhaddāsa flourished about A.D. 1250. (Vide p. 6 of Introduction).

2. The five colours of *Rāṅgoli* described by Arhaddāsa appear to have some suspicious significance. We have already recorded the references to the design of five-coloured rice grains used in वर्णिकर्म as mentioned in the *Varāṅgacarita* (XXIII, 15) of A.D. 7th century and the designs of five-coloured powders (पंचवर्णरत्नैः) on the occasion of king's coronation as mentioned in the *Āśāsthaiaravohalpa* (between A.D. 1400 and 1600).

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This is a reference to such designs worked permanently by fixing coloured stones on the floor in the queen's apartment.

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“रङ्गवलीषु परमागच्छसन्म” — which speaks of “devising a ground which should set off the design.”

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“आह्वयणं च विदुः कनकपदमन्थनं सुवाचकात् च ।”

Hemacandra explains :—

“आह्वयणं विदं दशमे गृहमन्थनार्थं सुवाचकात् च । तन्मुलपिष्टक्रीरं गृहमन्थनम् आह्वयणं इति ज्ञेयम् ।” (vide p. 38 of *Deśināmamālā*—B. O. R. Institute, Poona, 1938). In the *Glossary*, p. 7 the editor explains आह्वयणं as follows :—

“आह्वयणे i, 78 पिष्टम्, a ground substance;

“दशमे गृहमन्थनार्थं सुवाचकात्, White wash.

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It is clear from the above reference that in Hemacandra's time the term “आह्वयण” meant some “ground substance” as also “whitewash used for beautifying the house on a festive occasion.” This term also meant “a solution of a rice-flour used for decorating the house.”

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Arhaddāsa (c. A.D. 1250)¹ in his *Munisuvrata-Kāvya* (edited by Pt. K. Bhujabali Sastri and Pt. Haranath Dvivedi, Arrah, 1929) refers to “रङ्गलयः” (*Rāṅgolī* designs) made of five different jewels and drawn in the court-yard of each house on the occasion of the birth of Jinendra as will be seen from the following verse 23 of canto IV :—

Page 80 — “प्रत्यङ्गणे कल्पितपंचरत्नरंगालयद्वन्द्वकुर्येकमेवगः ।

त्रिनेत्रुज्ज्वाचस्रप्रणयत्पयोधरस्रस्त धनुर्विधांकाम् ॥ २३ ॥”

The commentary on this *Kāvya* explains this verse as follows :—

“बहुविधा (अनेक रंगाः) रंगानाम् भासयः (रंगालयः) पञ्चरत्नैः² कृताः रंगणमंगणं प्रति कल्पिताः त्रिनेत्रुज्ज्वाचसरे विनयत् मेघः (पयोधरः) तस्मात् स्रस्तं धनुः तस्य संदेहं (विधांकां) चक्रुः ।”

(The five-coloured *Rāṅgolī* designs presented the appearance of a rain-bow dropped on the earth by a vanishing cloud on the occasion of the birth of Jinendra.)

In my search for the history of the *Rāṅgolī* designs the earliest reference so far recorded by me is that found in the *Varāṅgacarita* (7th century A.D.) XXIII, 15, which mentions the use of five-coloured (दशापर्वणैः) powders (चूर्णैः), flowers (पुल्लैः) and rice-grains (तण्डुलैः) for drawing various designs on the ground (भूमिप्रदेशे नाम्नाकृतीन् रचयाम् नृपुः). This reference of the 7th century A.D. can be linked up with one of the 64 arts mentioned in the *Kāmasūtra* of Vātsyāyana (between c. A.D. 50 and 400). This art is designated in the *Kāmasūtra* as “तण्डुलकुसुमबलिचिकाराः” (vide p. 32 of *Kāmasūtra* ed. by Kedarnath, N. S. Press, 1900—साधारणमधिकरणम् Chap. 3). The commentator Yaśodhara in his *Jayamaṅgalā* commentary (p. 34) explains the above art as follows :—

“तण्डुल—कुसुम—बलिचिकारा इति । अस्त्रण्डतण्डुलैः नामाचरैः सरस्वतीभवने कामदेवमयने वा मलिकुट्टियेषु भक्तिचिकाराः । तथा कुसुमैः नामाचरैः प्रयितैः सावलिङ्गाविपुवार्यं भक्तिचिकाराः । अत्र प्रयनं मास्यप्रयनं पद्माम्भृतम् भक्तिविद्येणैव जवस्यापनं कलास्तरम् ।”

1. Arhaddāsa refers to Āśādhara in the *Munisuvrata-Kāvya*, and also in two other works composed by him viz. *Purudeva Campū* and *Bhauyakanjāhāraṇa*. This Āśādhara was the Guru of Arhaddāsa. As the date of Āśādhara is about Samvat 1300 (= A.D. 1244) we may reasonably conclude that Arhaddāsa flourished about A.D. 1250. (Vide p. 8 of Introduction).

2. The five colours of *Rāṅgolī* described by Arhaddāsa appear to have some suspicious significance. We have already recorded the references to the designs of five-coloured rice grains used in बलिचिकारम् as mentioned in the *Varāṅgacarita* (XXIII, 15) of A.D. 7th century and the designs of five-coloured powders (पंचवर्णरत्नैः) on the occasion of king's coronation as mentioned in the *Āśādhairavaśkalpa* (between A.D. 1400 and 1600).

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According to Yaśodhara the art mentioned by Vātsyāyana consisted of floor-decorations with rice-grains of many colours in the temple of Sarasvatī (the goddess of learning and arts—“सरस्वती च नागदेवता विद्याकामसु चरि देवता” —p. 51) or the temple of Kāmadeva (god of love) and the designs made with many-coloured flowers for the worship of Śivaliṅga.

In view of Yaśodhara's explanation of “तन्त्रुल-कुसुम-वलिचिकाराः” recorded above I am inclined to think that the origin of our present-day practice of drawing *Rāṅgoli* designs lies in one of the 64 arts mentioned by Vātsyāyana, though later this art became more elaborate and complicated according to the artistic genius of the people of the different provinces of India. The religious association of this art has also been made clear by Yaśodhara by his statement that the designs under reference were drawn on the floors of the temples of *Sarasvatī* or *Kāmadeva* or in connection with the worship of *Śivaliṅga*.

The evidence about the history of *Rāṅgoli* which I have collected from varied sources may now be tabulated chronologically as follows :-

Chronology.	Reference.
A.D. 50-400 ...	The <i>Kāmasūtra</i> mentions “तन्त्रुल-कुसुम-वलिचिकाराः” as one of the 64 arts.
A.D. 600-700 ...	<i>Varāṅgacarita</i> refers to various drawings drawn on the floor by using five-coloured powders, rice-grains, flowers, on the occasion of रात्रिबलि.
A.D. 915 ...	Trivikramabhaṭṭa in his <i>Nalacampū</i> refers to “रत्नावलि” in front of houses on a festive occasion (marriage ceremony).
A.D. 959 ...	Somadeva in his <i>Yasastilakacampū</i> refers to रत्नावलि or रत्नावली of camphor-dust, jewels etc. four times.
after A.D. 1050 ...	Vīdībhāsīṭha in his <i>Gadyacintāmaṇi</i> mentions “मण्डलप्रीक्षा” drawn on the grounds in a dining pavilion.
A.D. 1088-1172 ...	Hemacandra in the <i>Deśīndamālā</i> mentions “नाट्यपत्र” and explains it as “तदुक्तविद्ययादे गृहसंघटनम्.”
c. A.D. 1100 ...	Aparārka quotes श्रीधरपत्र, who prescribes उपजेन of ground followed by drawings of geometrical figures on it like circles etc.
A.D. 1130 ...	Someśvara in his <i>Mānasollāsa</i> refers to पृथिवीपत्र and रत्नावलि which are identical with रत्नावली drawings with powders or liquid solution.
after A.D. 1130 ...	Śrī Kumāra in his <i>Silparatna</i> also mentions पृथिवीपत्र or रत्नावलि.

<i>Chronology</i>	<i>Reference</i>
c. A.D. 1250 ...	<i>Munisuvrata-Kāvya</i> of Arhaddāsa describes <i>Rāṅgoḷī</i> drawings of jewels of five colours, which looked like a rain-bow. These drawings are called "रङ्गलपः."
c. A.D. 1250 ...	<i>Līlācaritra</i> mentions "रंगमालिका" and "सवासंमार्जन."
c. A.D. 1273 ...	Bhāskarabhaṭ mentions "रंगवली" in his <i>Śitupāḍā-vādha</i> .
A.D. 1400-1650 ...	<i>Pārijāta</i> prescribes the drawings of स्वस्तिक etc. with शिलापूण (powder of quartz) in a temple.
A.D. 1400-1600 ...	<i>Akātahāiravakalpa</i> mentions रङ्गवली drawings many times in different religious ceremonies.
A.D. 1608-1682 ...	Saint Rāmadāsa mentions "सडे संमार्जन" and "रंगमाला" in his <i>Mānasapūjā</i> .
A.D. 1729-1794 ...	The Marathi poet Moropant mentions "रंगोळी" in his <i>Virāṭaparva</i> .
A.D. 1838 ...	Tryambakbhaṭṭa Māte in his <i>Ācārendu</i> quotes <i>Mārkaṇḍeyapurāṇa</i> , which prescribes गोमवानुष्ठेयन of ground followed by the drawing of स्वस्तिक figures on it. He also quotes the <i>Smṛtiratnākara</i> , which prescribes उपस्थेयन of ground.
A.D. 1884 ...	Note on <i>Rāṅgoḷī</i> in the <i>Bombay Gazetteer</i> .

I believe, the fore-going evidence shows conclusively the history of our *Rāṅgoḷī* art for about 2000 years. This history can be taken back easily by at least 500 years as we are warranted in presuming that this art mentioned by the *Kāmasūtra* as "नपुलकुमुमलिविकारः" was a recognised art hundreds of years before the time of the *Kāmasūtra* and was, therefore, mentioned among the 64 arts by its author, Vātsyāyana.

As the *Rāṅgoḷī* art has a continuity in Indian domestic and religious life for more than 2000 years, I may record here the reports of some friends who have taken great interest in this problem and sent me the available information regarding the *Rāṅgoḷī* art as practised at the places where they are living to-day. These reports are as follows :—

(1) *Rāṅgoḷī at Bikaner*—My friend Śrī K. M. K. Sarma, M. O. L., Curator, Anup Sanskrit Library, Bikaner, writes on 23-12-1947 as follows :—

"As regards *Rāṅgoḷī* in Bikaner, my colleague Pandit Ghan Shyam Goswami has gathered the following information :—

(1) On the 4th marriage day the Goswami Brahmans perform the *Nāgavalī* ceremony. For this, *Sarovatobhadra* with four elephants on four sides is drawn in various colours,—(elephants—one in coloured

rice, the other in *wheat flour*—these two opposite to each other—and the remaining two in *salt* and *sugar* respectively).

(2) On *birth-days* it is customary for women to draw *Rāṅgoḷis* on *Thalis* in the *Āratī*.

(3) On the 6th day of a *son's birth*, the *Kuladevatī* is drawn in *Rāṅgoḷi* of auspicious colours (*yellow* and *red*) on the wall.

(4) On the *Nāgapañcamī* day, the seven serpents are drawn in *Rāṅgoḷi* of *Haldi* etc. by women.

(5) On the day of *Tulasī Vrata*, women draw *Rāṅgoḷi* in front of *Tulasī*.

(6) On *Śrāvṇa Śukla Pūrṇimā* the *Rāṅgoḷis* of *Śrāvṇa Kumārā* carrying his parents in a *Kācaḍ* are drawn (on both sides of the main entrance) by women."

(II) *Rāṅgoḷi* in *North Malabar*—Mr. K. M. K. Sarma in his letter referred to above writes :—

"*Rāṅgoḷi* is drawn every day in the court-yard in the month of *Simha* in *North Malabar*, particularly if *Kṛṣṇappāṭu* (*Bhāgavata*) is being read. It is a practice there to read *Rāmāyaṇa* in the month of *Karṭika* and *Kṛṣṇappāṭu* in *Simha*. The *Rāṅgoḷi* is adorned with certain kinds of flowers. *Rāṅgoḷis* on door-steps are usually drawn in *South Kanara* also after wash with water and besmearing with cow-dung on auspicious occasions."

(III) Śrī Gajapathy Rai Varma writes from *Tadepalligudem* (South India) on 3-12-47 :—

"I am glad to learn that you are writing a paper on *Rāṅgoḷi* or *Raṅgavalli*. In *Telugu-speaking* areas (*Āndhra*) it is commonly called "*Muggu*" "*Mruggu*" (in books, plural, *Muggulu* and *Mruggulu* respectively). In the districts on the East coast it is common among the people of all castes to lay *Muggulu* on their threshold after cleaning them and after sprinkling on them water mixed with cow-dung. But in *Telingana* people use *Muggulu* on every Friday and Saturday, as also on auspicious days and festive occasions. During the worship of gods and during festivals they use *coloured Muggulu* but the common stuff used for this purpose is the white powder of the lime from shells. I think this is quite a sanitary practice as lime-powder is a germicide. *Lime powder* is used daily for *Rāṅgoḷi* drawings but during festivals, marriages, and other auspicious occasions *rice-powder* is used. The *Saṅkrāntī* (*Makara-Saṅkrāntam*) festival is the chief among festivals famous for *Muggulu designs*. It falls in the first fortnight of January. During this festival women, including young girls, begin drawing various kinds of designs with white *rice-powder* etc. on the thresholds of their houses from a day, fifteen days previous to *Saṅkrāntī*, in the early hours of morning. In their zeal to excel others in drawing the

Muggulu designs some of the women and girls commence their labours in this direction as early as 4 a.m. They bring cow-dung, from which they make some balls, which are kept in the midst of *Muggulu*. These balls are then decked with flour. The balls so decked are called *Gobbi*. Every day fresh *Gobbi*s are made and the old *Gobbi*s are turned into small cakes with a hole in the centre of each. These small cakes are then made into a garland. Sometimes pieces of copra are inserted between dung-cakes in the garland. After drying such garlands throughout the 14 days they are burnt on the *Bhogi* (called *Pongal* by Tamils) day i.e. a day previous to *Sankranthi*. (A day preceding any festival is called *Bhogi*). The bon-fire of cakes generally commences at midnight. The children commence this bon-fire from the early hours of the morning. Before burning these garlands of cakes, some children wear them on their necks. On the day following the *Sankrān̄thi* the women (mostly girls and young women, who show great interest in *Muggulu* and who even bet with each other in drawing the latest *Muggulu* designs etc.) begin at dawn the drawing of an unbroken line of *Muggu* (single line) from their house to the end of the street or some spot at a distance at about 200 yards. Sometimes the *Muggu* line extends to several furlongs. One girl takes the *Muggu* line from her house to that of her neighbour and the neighbour in her turn takes it further to her neighbour and so on.

Locally in these districts I find that the special *Muggulu* drawn on the *Sankrān̄thi* occasion are in honour of the *Sankrān̄thi Puruṣa*. People are afraid of this *Puruṣa* as he is of a malevolent character. To avoid his wrath the *Muggulu* are drawn. Some people depict his birth, bringing up and death also in these *Muggulu*. But it seems that the *Sankrān̄thi Puruṣa* mentioned above is none but king *Bali*, who is the legendary virtuous king, the ruler of *Rākṣasas*, sent to *Pātāla* by Viṣṇu in the *Vāmana* incarnation. The people say that he was the king of the South Indian people or people of the country and that they draw these *Muggulu* designs in his honour.

Some books contain references to *Muggulu* with various colours and precious stones drawn on the occasions of marriages of great persons, kings and gods etc. *Muggulu* drawings are found on the walls of houses in villages. The walls are first white-washed and then the *Muggulu* designs are drawn on them. Similar designs are drawn on the floors as well."

In a subsequent letter dated 11-12-1947 Mr. Varma sent to me the following additional information about *Muggulu* :—

"Here almost all the non-Brahmin castes including *Perikes* worship earthen pots painted with multi-coloured lines, dots, designs etc. on them. These pots are called *Ariveni* and much sanctity is observed with regard to them.

Red *Muggulu* drawings are drawn in these parts by *Tāntrikaḥ* or magicians, who give some talisman or threads to drive away evil spirits. In the worship of benevolent and good deities also multi-coloured *Muggulu* are drawn by women but in the *Tāntrik* worship they are drawn by men.

For all indoor purposes *Muggulu* of white and other colours are drawn, while for out-door purposes only powder of shells is used. There are also certain *instruments* used for drawing *Muggulu* designs and decorations. Rice-powder (for indoor use) or shell powder (for outdoor use) is put into these instruments, which are then dragged on the floor producing *Muggulu* designs and decorations. Sometimes *Muggulu* designs are drawn on the doors and door-sides with *Kunḥama* (red colour and *Paṣupu* turmeric) often mixed with gum or some other colours. The designs on the doors consist of horizontal stripes, dots, circles, angular figures, *Seastika* etc.

The bridal couple of the *Perike* caste worships after marriage the *Ariṅeni* (earthen pots) smeared with white, red and yellow colours in various designs. During the *Dipāvāli* festival small earthen pots called *Gurigi* (plural *Gurigelu*) are used by *Perike* women. In these pots they put some eatables and place them before the goddess *Lakṣmī* as also other goddesses. These eatables are then distributed among women guests. These *Gurigelu* pots are painted like the *Ariṅeni* pots but these paintings are not so colourful and attractive as those on the *Ariṅeni* pots."

The importance of the *Muggulu* designs in the Tamil country was further vouched by Mr. Varma by a small booklet containing numerous *Muggulu* drawings depicting such objects as the following :—

Steamer, Cradle, Eagle, Rose-water vessel, Pine-apple, Flowering tree, A sea octopus, Betel leaves plate, Beans creeper, Sofa, bridal seat, Threshold, *Puṣpakavimāna*, Lotus shaped umbrella, Sun-flower, Child's cot, Wedding altar, Wedding seat, Wedding threshold, Woman's upper arm ornament, Mandap, Elephant, Fish, Parrot's cage, Mirror with frame, Flower ball, Water pot, Chair, Pearl necklace, Light stand, Tulasi, Sweets packet, Sandal paste pot, Palanquin, Parrot, Chariot with wheels etc.

The history of the art of *Rāṅgoli* as briefly sketched in this paper is enchanting enough especially for the students of Indian culture. The present condition of this art in different parts of India needs to be studied carefully. I hope, therefore, that the readers of this article will report to me all possible information about this art as practised in different parts of the country.

12. THE ROLE OF THE COURTEZAN IN THE EARLY HISTORY OF INDIAN PAINTING*

The *Mānasollāsa*¹ of the Western Cālukya King Someśvara² is a veritable encyclopaedia of Indian Culture and affords useful materials pertaining to different arts and sciences as known about A.D. 1100. It contains accordingly some material regarding painters and painting and the technique of the painter's art etc. It describes the painters in the following verses :—

“ प्राशमेर्मायकेस्तत्रैः सूक्ष्मरेखाविधारदैः ।
विचिनिर्माणकुशलैः पञ्चकेशनकोविदैः ॥ ११० ॥
वर्णरूपवस्त्रेषु वीरणेषु च कृतधर्मैः ।
वित्रकैश्चयेष्वित्रं नानारससमुद्भवम् ॥ १११ ॥ ”³

The above verses refer to male painters only, who were of the professional type and who were employed for decorating the walls of the king's palace.⁴ Elsewhere⁵ in the elucidation of *Citravidyā* Someśvara deals with the characteristics and types of pictures as follows :—

“ कसञ्जुयातानि सर्वाणि * वाच्यते वैव माविमुद् ॥ ८१९ ॥
तसद्गुपाजुसारेण ऐस्वनीयानि कोविदैः ।
सद्यसं शिष्यते यत्तु दर्पणे प्रतिबिम्बवत् ’ ॥ ९०० ॥

* *Annals* (B. O. R. Institute), Vol. XXII, pp. 24-37

1. G. O. Series, Baroda, No. LXXXIV, Vol. II, 1939, ed. by G. K. Shrigondekar.

2. Someśvara or Dhālokamalla ruled from A.D. 1116 to 1127. He devoted his entire attention to song and dance. He has devoted 2500 verses to music. (Vide pp. 853-854 of *Classical Sanskrit Literature* by Krishnamachariar, Madras, 1937). He has devoted about 775 verses to the description of the चित्रविद्या (pp. 13 to 79 and verses 130 to 905 of Vol. II of *Mānasollāsa*).

3. Ibid. p. 73.

4. Ibid. p. 79—

“ चित्रं लक्षणसंयुक्तं तैस्त्रयिणा महीपतिः ।
प्रासादे इचिरे तुष्टे सौवर्णकलयाभिते ॥ ९०९ ॥ ”

Percy Brown (p. 19 of *Indian Painting*, Heritage of India Series) observes — “ In Sanskrit and other literatures there are references to the secular aspect of the art, with the further information that it was in wall-painting that these ancient artists largely excelled. ”

5. *Mānasollāsa*, II, pp. 78-79.

6. In the previous verses directions for the painting of horses (हयचित्र) verses 836-873 and elephants (गजचित्र) verses 874-898 are laid down by Someśvara.

7. This reminds me of the art maxim *Hold the mirror up to Nature*. Compare the following remarks on Ajanta paintings by Griffith quoted by Vincent Smith (p. 106 of *History of Fine Art in India and Ceylon*, Oxford, 1930). “ Here we have art with life in it, human faces full of expression, limbs drawn with grace and action, flowers which

तद्विषये विश्वविद्यालयिककर्माद्यो बुधाः ।
 बाकार्त्सर्ग किञ्चामीति यदनुदिश्य लिख्यते ॥ १०१ ॥
 बाकार्त्सर्गस्यैव तद्विश्वमिति स्मृतम् ।
 यद्गारादिरत्नो यत्र दर्शयामास गान्धर्वे ॥ १०२ ॥
 माधवियत्रै तदाख्यातं विश्वकीर्तुकारकम् ।
 तदुच्यतेष्वेकैकं धूलिविचित्रं विदुर्बुधाः ॥ १०३ ॥
 सुप्रमाणं तथा विश्वमिदं माधविक्रमम् ।
 रसधूलिगतं शोकं धारसोद्धारसपुस्तके ॥ १०४ ॥
 विर्मितं विश्वकर्मैव विश्वतोद्धारकम् ।
 यद्विचित्रमिदं विश्वविद्यायिदिना ॥ १०५ ॥ ”

From Someśvara's treatment of the *Citravidyā* we do not gather any data which might enable us to visualize the Indian painter whose personality remains, therefore, intangible and vague in spite of references to painters and painting in Sanskrit literature.¹

In view of the paucity of data² about the personality of the Indian painter we must make an effort to gather data which might enable us to paint his personality in words, if not in colours and the present paper is one such attempt dealing with the role of the *ganikā* or the courtesan in the early history³ of Indian painting.

bloom, birds which soar, and beasts that spring, or fight, or patiently carry burdens; all are taken from Nature's book growing after her pattern etc."

Reference to the picture of the heroine drawn by the hero is found in the drama *Nāgānanda* of Śrīharsa (7th c. A.D.) in Act II:—

"शिवानिहितेषु संकल्पैः स्थापिता सुरः ।
 दृष्ट्वा दृष्ट्वा लिखाम्येतां यदि तत्कोऽत्र विस्मयः ॥ ”

This is a reference to a picture drawn by imagination.

1. Vide *Indian Painting* by Brown, p. 6— "The painter whether Budd hist, Rajput or Mogul walks through the pages of history a vague, indefinite, elusive being. Only his pictures remain to prove that he was a virile character, absorbed in his work. In these productions a certain personality is indiscernible but of an abstract nature difficult to focus as an actual individual in relation to his art."

2. Bāga (A.D. 600) has given us a list of his companions which includes a painter (विश्वकर्म) of the name वीरवर्मा and men and women of varied professions (like ताम्बूलदायक, पुस्तकभाचक, सार्द्धिक, गान्धर्वोपाध्याय, संवाहिका, आशिक, नर्तकी, धातुधातु-विद्, मन्त्रसाधक, मायाकवि, क्षयक, etc.). (Vide p. 3 of P. V. Kane's *Intro. to Harṣacarita*, 1918).

3. Vide p. 426 of *Early History of India* by V. A. Smith, Oxford, 1914. The large fresco painting in cave No. 1 at Ajantā which represents the Persian embassy to Pulakesin II in A.D. 625-26 is of the highest value as a landmark in the history of art. It establishes a standard by which the dates of other paintings at Ajantā can be judged. It also "suggests the possibility that the Ajantā School of Pictorial Art may have been derived directly from Persia and ultimately from Greece" (vide p. 388 of *History of Fine Art in India and Ceylon*). Though the Cālukya power which originated with

Dāmodaragupta, the minister of the Kasbmir king Jayāpīḍa¹ in his remarks on the character of courtezans states² that they practise the art of painting (*ālekhyā*) for advertisement only and not for diversion (*vinoda*), i.e. as a pursuit or occupation. If this statement is correct it indicates that about A.D. 750 the art of painting was practised by courtezans as a means for making their trade more attractive to people. It is, however, certain that at this time painting was practised by the courtezans, a fact which contrasts with the modern accomplishments of the courtezans which include only singing and dancing (*Saṃgīta* and *Nṛtya*). It is, therefore, necessary to examine if there is evidence to

Pulakeśin I at Vātāpī (Badāmi) about A.D. 550 was on the decline during the reign of Cālūkyā. Bhūlokaśmalla Someśvara of Kalyāṅga (A.D. 1125-26) it is possible to suggest that the *Cītravidyā* or the art of painting to which Someśvara devotes 775 verses in his *Mānollāsa* was a product of the Cālūkyā art tradition which produced the Ajanta frescos of the time of Cālūkyā Pulakeśin II (7th century).

Though all human pictures require materials of painting and good painters, the master artist of this Universe requires none in his production of the cosmos as stated in the *Rasagaṅgādhara* by Jagannātha Paṇḍitarāya —

“ निववादानंसारमभिज्ञानेव तन्वते । जगत्पित्रं नमस्तस्मै कलासाध्याय शुभ्रिने ॥...चित्रस्य च केशलस्योरादानानां मधीहृतिशालादिनामाधारस्य भित्तविद्यामार्गे केशलाकृतौ जागर्तव्योत्पत्तैः-संभवः etc. ”

1. Vide p. 372 of Smāh's *Early History* etc. He was the grandson of Muktaḍḍīpa (A.D. 740).

2. Vide p. 59 of *Kuṣṇajñāna* (Kāvyaśālā, 1887).

“ यालं त्रयनावर्णे परकौतुकन्दये न तु तृया ।
उज्ज्वलतवेपथेना काभिरनाकृष्टये न तु स्थितये ॥ ३०५ ॥
मांसरसान्वहारः पुषवाहतिपीडया न तु सृष्टया ।
आलेख्याद्वा इयसनं वैदुष्यक्यातये न तु विनोदाय ॥ ३०६ ॥ ”

Amarakośa (III. 3, 178) refers to आलेख्य (आलेख्याद्यर्थयो विप्रम्).

In a Purāṇic Kāvya of 7th century called *Vārāṅgarita* ed. by Dr. A. N. Upādhye (1938) p. 218 we find reference to wall-paintings of a वैत्यशूह—

Chapter XXII—

“ द्वारेष्विष्टा कमलान्या श्रीः उपान्तयोः किञ्चरभूतयज्ञाः ।
तीर्थकराणां हलिकर्णिनां च भित्तवन्तरेष्वालिकितं पुराणम् ॥ ६१ ॥ ”

Then on p. 177 (Chap. XIX — मनोरमा मतिविप्रव) a पुञ्जी well-versed in चित्रकला is mention ed—

“ कश्चिद्दटं चित्रकलाचिद्व्या लिलेश पुञ्जीनृपतेः शितपायम् ।
अनेकं चित्रमतीव विदं तद्पुञ्जमत्वं च विचिन्तयन्त्याः ॥ ४४ ॥ ”

... ..
“ अन्यायसंर्मादन वेपिलाग्री हस्तदयेन प्रममर्तं चित्रम् ।
सखी च तद्रूपेण जगद् वान्यं चित्रं किञ्चेद्दटं मे निशङ्का ॥ ४३ ॥ ”

The *Naiḍadhokīya* VI, 64 refers to the female companion of the heroine as expert in painting लिपीषु आर्तिविद्ययात्मता. Mallinātha explains लिपीषु as चित्रकर्मणु.

assume that painting was practised by the courtezans before the 8th century of the Christian Era and for this purpose I shall record in this paper some references which go to prove that painting was associated with the daily life of the courtezans in the early history of India painting.

In the literary evidence referred to by Vincent Smith¹ regarding the history of pictorial art in India no reference is found to women painters. He only tries to prove "the early and continuous practice" of the painter's art in both India and Ceylon but says nothing about the personality of the Indian painter, much less of the woman painter.

In the *Kāmasūtra* of Vātsyāyana which according to Dr. A. B. Keith² was composed about 500 A.D. or according to Bhandarkar c. A.D. 100, mention is made of the 64 arts (*Kalās*) which are contributory or ancillary to the *Kāmasūtra*. These arts include *Ālekhyā* or painting.⁴ A prostitute (*ceṭyā*) well versed in these 64 arts is said to be respected in society³ as also at the royal court.⁴ Vātsyāyana

1. Vide pp. 92-93 of *History of Fine Art in India and Ceylon*, Oxford, 1930. Some points from Smith's evidence may be noted here—

- (1) There are references to pictorial art in Pali Buddhist Canon (a.c. 3rd or 4th century)—Pleasure-house of kings painted with figures etc.
- (2) *Rāmdyoga* refers to painted halls.
- (3) Allusions to portraits in the dramas of Kālidāsa and his successors.
- (4) The Ceylonese Chronicle *Mahāvamsā* (circa 5th century A.D.) refers to mural paintings on a relic chamber constructed about B.C. 150.
- (5) Chinese pilgrims (5th, 6th and 7th centuries) notice several examples of Buddhist pictures.
- (6) Tāranāth, the Tibetan historian of the beginning of the 17th century ascribes the most ancient pictures to gods.

2. Bāṅs c. A.D. 601 in his *Kādambarī* (P. V. Kane, 1920) refers to the purāṇic story of pictures drawn by चित्रलेखा, the friend of उषा who was in love with अनिरुद्ध—

P. 67 — "चित्रलेखायांशितविचित्रसकलभुवनाकारम्" (Vide विष्णुपुराण (V. 32, 20).

P. 50 — "बन्धापीडः...चित्ररुमणि...कलाविद्येषु परं कौशलमवाप."

P. 59 — "चित्रकल्पे भूमिपालपतिविम्बमाध्वना।"

3. Vide p. 469 of *Sanskrit Literature*, 1928.

4. Vide p. 32 of *Kāmasūtra* (ed. by Pt. Kedarnāth, N. S. Press, Bombay, 1900)—

"गीते, वाद्यं, नृत्यं, माण्ड्यम्"

...इति बह्विधैरविद्याः कम्मन्त्रस्यावशिष्यः ॥ "

5. Ibid p. 41-42—

"जाभिरेशुचिद्रता वेष्टया शीतरु-सुगान्विता ।

रुमते माण्ड्यास्यं स्वाने च अनसंहरि ॥

पुजिता च सदा यथा गुणवद्भिश्च संस्तुता ।

प्रार्थनीयाभिगम्या च लक्ष्यता च जायते ॥"²

The commentator Yaśodhara explains—

"कलाक्षेत्रे कलमाह जाभिरिति । क्वाभिरेशुचिद्रता ज्ञातौर्त्वा" etc.

6. The Greek *hetairas* or prostitutes were "the most gifted and brilliant member of their class known to history" and "wielded great and open influence" (vide p. 59, of *Encl. Brit.* Vol. XVIII, 14th edn.).

prescribes the art of painting also for the *nāgaraka* (the elegant). We find accordingly *citrāphalaka* and *varikāsamudgaka* mentioned as the accessories of his drawing room.¹

The accomplishments of the courtesan as prescribed by the *Kāmasūtra* may be favourably compared with those of the courtezans at the Vijayanagara court of the 16th century. In the account² of these courtezans given by Prof. Venkataramanayya no reference to the art of painting as pursued by these courtezans could be noticed, though pictures representing love-stories from the *purāṇas* were painted on the walls of their rooms.³ A courtesan was required to be very accomplished⁴ in several fields to capture men of wealth and distinction as stated by a contemporary author; but in these accomplishments I find no reference to the art of painting.

In the *Datākumāracarita* ascribed to Daṇḍin who belongs to the 6th Century A.D. according to Prof. P. V. Kane⁵ we find the art of

1. *Kāmasūtra*, p. 45— "बाह्ये च वास एहे...चित्रफलकम् । बर्तिकासमुद्रकः । etc." Yasho. dhara explains "चित्रफलकमादिख्यायम् । बर्तिकासमुद्रकः चित्रकर्मोपयोगी."

2. Vide pp. 401-406 of *Third Dynasty of Vijayanagara* (A.D. 1530-1543), Madras, 1935.

3. Ibid p. 402— The courtezans were regarded as a respectable community— Women of any community joined the courtesan class— They were taught (1) Reading and writing, (2) Sanskrit and vernacular literature, (3) Singing, (4) Dancing. The education imparted to them was such as developed in them a set instinct at a very early age.

Vide also the remarks on Vijayanagar courtezans in Dr. B. A. Saletore's *Social and Political Life in Vijayanagar Empire*, Vol. II, (1934), pp. 165-172. In these detailed remarks also I have failed to notice any reference to the pursuit of the art of painting by the Vijayanagar courtezans though their proficiency in other arts is vouched for by contemporary evidence.

4. Ibid, p. 403— "According to a contemporary author (Kandukūri Rudra Kavi in his *Nirāṅkuṣāpāhādyāna* 240) the most successful courtesan had to employ several arts in keeping her lover firmly moored. If he were a scholar, she discoursed with him upon the beauty of the classics; if he had no taste for learning, she sang melodiously; on occasions when song did not please him she entertained him by playing upon the *vīṇā*; when that did not arouse his interest she played dice with him; and when dice ceased to have attraction, she engaged him in witty conversation; for she was a learned scholar, a clever gambler and a brilliant conversationalist"— "Prostitution was regarded as the lawful profession of the community and no blame was attached to it so far as the members of the caste were concerned. On the contrary they were highly respected." (p. 405).

5. Vide Introduction to *Sāhityadōrpaṇa*, 1923, p. xli.

painting' associated with the courtezans in the manner prescribed by the *Kāmasūtra* of Vātsyāyana.

In the drama *Mycchakaśhika* we find a description of a *ganikāgṛha* or the house of a courtesan which is styled as नन्दनवन and in which *ganikās* are described as moving about with picture-boards in their hands. These picture-boards (*citrāphalakas*) are described as besmeared with varied colours.³ This description clearly proves the association of the art of painting with *ganikās* at the time³ of the composition of the drama. The question now arises: When and why the art of painting ceased to be associated with the accomplishments of the courtesan, if its existence during the early centuries of the Christian era was a necessary concomitance of the life of the courtesan? This question must be left to the experts in the ancient and mediaeval

1. Vide p. 39 o. *Dakṣaśāstra Carianam*, Bombay, 1883.

Uccheda II—

“एष हि गणिकागृहः कश्चिद्वाः यद्...नव्यनन्दनप्रविद्यानां साधनां, नृत्यगीतवाचनाक-
चित्रस्वाद्यगन्धपुष्पकण्डावु विविधानवनकोयानादिषु च सम्यग्विनयनम् etc. *Uccheda III*— p. 88.
—चित्ररटम्; p. 89— वाज्वल्यम्. *Uccheda V*—(p. 117) “अहं च गता.....सुवर्तामद्रासम्।
सा गतात् स्वस्त्यतिथिं चित्ररटे तिष्ठितं मत्सराद्यं कृत्वा सुहृदं मां च पदोपेण निर्बन्धयन्तं वसिष्ठं
वसिष्ठं स्वर्षं च कृत्वातिष्ठन्। मयापि तत्र चित्ररटे मत्सराद्यं पर्यता etc.” “चित्ररटे
च...ममेवंप्र प्रतिष्ठति:”, “मये देहि मे चित्ररटम्.”

See the graphic description of the preparations of a marriage in a royal family given by Bhaṅga in his *Harjatarita* (*Uccheda IV*) where we find women, clever in painting and drawing figures decorating polished jars and groups of raw clay ware:—

“चित्रवतीभिः चित्ररटान्धे-वस्तुनाभिः कन्यांश्च परलिताशोतलभान्ताजिरेणीव मन्-
कतीभिः” (Vide p. 70 of Kane's Edn. 1918—*Harjatarita* I-IV) शालाजिरे = शरव

2. Vide p. 102 of *Mycchakaśhika*, ed. by H. M. Sarma, N. S. Press, Bombay, 1910—
Act IV:—

“इमे चारो मदनसंधिचिह्नच्युतः विविधवर्णिकान्तिचित्रफलकग्रहस्ताः इतस्ततः परिभ्रमन्ति
गणिकाः वृद्धविटाश्च” “The expression “मदनसंधिचिह्नः” is explained as “skilled in
bringing about peace or discord in love affairs”.

3. Dr. V. G. Paranjpe in his Intro. to his edition of the *Mycchakaśhika* (1937, Poona, p. xvii), states that this drama is a work of the 2nd or 3rd century A.D. The following views of scholars have been referred to by H. M. Sarma on pp. iv to vi of his Intro. to his edition of 1910:—

(1) Weber—2nd century B.C. (2) Wilson—of respectable antiquity.

(3) Monier Williams—1st century A.D. (4) Lassen—150 A.D.

Krishnamachariar (*Classi. Sans. Lit.* 1937), p. 575 f.n. 2 records the varied views of scholars re. the date of the *Mycchakaśhika*:—

(5) Ferguson—31 B.C. (6) Willford—1st and 3rd cent. B.C.

(7) Princep—21 B.C. (8) Regnaud—about 250 A.D.

(9) Pischel and Macdonell—6th century A.D.

(10) K. C. Mehdale—middle of the 6th century A.D.

(11) J. C. Ghatak—c. 3rd century B.C.

history of Indian Culture. Let us now proceed to the other references to *alokhya* or painting associated with the class of women designated as *nāyikās* in the *Nāṭyaśāstra*¹ of Bharata and specified as (1) *दिश्या*, (2) *नृपवती*, (3) *कुलकी* and (4) *गणिका*. Speaking of the *गणिका* class of heroines Bharata prescribes *वाक्केसव*² and other arts for them as well as for the other three types of *nāyikās* mentioned by him.³ This

1. Ed. by Pt. Śivadatta (Kāvyamālā, 42), 1894, p. 272 :—

“नायिकायै वक्ष्यामि वतसः पुनरेव तु ॥ ६ ॥

दिश्या च नृपवती च कुलकी गणिका तथा ।”

The *Dalarūpa of Dhanojaya* (ed. by C. O. Hess, New York, 1912) mentions three kinds of Heroines—(1) *स्व* or hero's own wife, (2) *अन्या* or another's wife and (3) *साधारणस्त्री* a common woman (p. 48). This common woman is defined as *गणिका* *वन्मिमागसम्बन्धोऽयमुक्त्वा* i.e. “a courtesan skilled in arts, bold and cunning” (page 53). Sanskrit is to be spoken by courtezans (page 75) who are put on a par with the Chief Queen and daughters of ministers. A courtesan is to be called “mistress” (*ajjuktā*) (page 77). In a *Prakarāṇa* the heroine is the highborn wife of the hero or a *Courtesan* (page 95). The high born woman *कुलजा* should be indoors, the courtesan (*वेद्या*) without.

2. *Nāṭyaśāstra* (KM 42) page 274 :—

“मानकस्याविशेषज्ञा नानाशिष्य विचक्षणा ।

गणशिल्पविभागज्ञा मानकस्यैवमिदं ॥ २९ ॥”

This is a description of the *शिल्पकारिका* in the *श्रीविभाग* which includes (1) *महादेवी*, (2) *देवी*, (3) *स्वामिनी*, (4) *स्वामिनी*, (5) *भोगिनी*, (6) *शिल्पकारी*, (7) *नाटकी* or *नाटकीया* and (8) *नर्तकी*.

Hemacandra in his *Nāṭyadarpaṇa* (c. 1160 A.D.) specifies the servants in attendance at the king's harem—“*कथंस्थाने प्रतीहारी...चित्रादी शिल्पकारिका*.” (Vide p. 200 of G. O. S. Edn. Vol. I, 1929).

3. *Harṣa's* sister *Rājyasīlā* was brought up in the midst of female companions who were quite accomplished in arts such as *नृत्य*, *गीत* etc.

(*Hemacandra*, IV) :—

“अथ राज्ञोऽपि नृत्यगीतासु विदग्धासु सखीषु सख्यासु च प्रतिदिशस्युष्वथोत्मान-
परिचया ज्ञानैः शनैश्चर्षत परिमितैरेव च दिवसैर्विनयापरोह ”

In *Kālidāsa's Śakuntalā* (Act IV) the female companions of the heroine *Sakuntalā* refer to *चित्रकर्मपरिचय* or knowledge of painting :— “*चित्रकर्मपरिचयेन अज्ञेयुः, त आनरव-
शिनियोगं कुर्वन्*” In Act VI we are introduced to the picture of *Sakuntalā* drawn by the king to amuse himself (*अधर्माक्षितमेतद्विनाशदस्यात्मम् । तस्मात्तच्छ बार्तिकां तावद्वानम्*). In *Kālidāsa's* drama *Vikramorvashya* (Act II) reference is made to the picture of the heroine *Urvashī* by the *Vidūṣaka* :—

“अथवा तत्रभवत्याः उर्वर्याः प्रसिद्धति चित्रकलेः क्षमिच्छिव्य आलोचयन् आत्मानं विमोहय ”

These references clearly prove the importance attached in those times to the art of painting.

In the *Mālavīkagnimitra* of *Kālidāsa* there are also some references to painting — “*चित्रगतं भर्तारं वदमाथेनो शूहीवाशुयति*” (Act IV). *चित्रशाला* or studio is also mentioned in Act I :— *चित्रशालां गता देवी प्रत्यमर्षरागां चित्रलेखमाचार्यस्यावलोकयन्ती तिष्ठति*.

reference seems to suggest that *ālekhyā* or the art of painting was a regular part of the accomplishments of high-born ladies as also of the courtizans of the time of the *Nāṭyaśāstra*. In the treatises on dramaturgy the courtizan is not represented as a woman of inferior type but on the contrary a highly polished woman well-versed in different arts and hence fit to be the heroine of a play in the same manner as highborn women. In fact Kauṭilya in his *Arthśāstra* seems to attach great importance to the art-education of prostitutes, which, he enjoins should be carried out at the expense of the state :

"Those who teach prostitutes, female slaves, and actresses *arīs* such as singing, playing on musical instruments, reading, dancing, acting, writing, painting, playing on the instruments like *Vīṇā*, pipe and drum, reading the thoughts of others, manufacture of scents and garlands, shampooing and the art of attracting and captivating the mind of others shall be endowed with maintenance from the state." ¹

Of course Kauṭilya's object in making the art-education of prostitutes a matter of state expense was not philanthropic but a purely political one as he states in the same context that "The wives of actors and others of similar profession, who have been taught various languages and the use of signals, shall along with their relatives be made use of in detecting the wicked and murdering or deluding foreign spies." A state that spends money on the education of the prostitutes does so with a view to make them state-agents. This was perfectly natural in those times and is even now in a limited sense. But whatever may have been the object of the art-education enjoined for the prostitutes by Kauṭilya the fact remains that painting was taught to the prostitutes at the time of the composition of the *Arthśāstra*, if not some centuries earlier as Kauṭilya records not only contemporary practices but settled practices of previous centuries, which may have been current in his days.

Let us now indicate the relative chronology of the references to the *practice of the art of painting by the courtizans*. This is as follows :—

1. Vide p. 139 of *Arthśāstra* (Eng. Trans. by Dr. Shm Sastry, 1939). Vide p. 36 of *Arthśāstra* ed. by J. S. Karandikar and B. R. Hivarganekar, 1927, Chap. 48 on *निष्कायस्य*—

"गीतवाद्यवाद्यवस्तुसनात्म्याहरेष्विषयीणां विप्रवृत्तयश्चिन्तनसम्बन्धस्य च गुरुतया । दानसंवाहनवैशेषिक-
कथाह्वानानि वाचिका द्वावी त्रौपरीनिनीषा प्रहृषयती । यत्रमन्त्रसत्वादीषु कुर्वात् ।"
("vaijñā" is referred to in *Mfuchohajiko* I, 4).

Chronology	Authority	References
c. 321 B. C. to 296 B. C. (J. F. Fleet)	<i>Arthasāstra</i> of Kauṭilya	Painting (चित्र) to be taught to the Prostitutes at state ex- pense.
Between B. C. 200 and A. D. 300 (P. V. Kane)	<i>Nāṭyaśāstra</i> of Bharata	The courtesan (nāyikā) should be shown as expert in dif- ferent kinds of painting (नाट्यशास्त्रविचारदा).
c. 100 A. D. (Bhandarkar) c. 500 A. D. (A. B. Keith)	} <i>Kāmasūtra</i> of Vātsyāyana	The courtesan should be pro- ficient in painting and other arts (64 <i>Kalās</i>) to ensure re- spect among the people and at the royal court.
c. 150 A. D. (Lassen) 2nd or 3rd cent A. D. (V. G. Paranjpe )			} Mṛcchakaṭikā of Śūdraka	Courtezans shown with pic- ture-boards besmeared with paints in the house of the courtesan Vasantasena, the heroine of the play.
c. 755 A. D.	<i>Kuṣṣānimata</i> of Dāmodera- gupta	Courtezans practising painting for advertising only and not for diversion (कृष्णकामधे न तु विलोपाय).

The chronology indicated in the above table is of course relative and approximate but it is sufficient to establish the fact that the art of painting was a necessary part of the accomplishments of a courtesan, say between about 500 B. C. and 800 A. D., a period which saw the rise of Indian painting as proved by the existing frescoes at Ajantā in the Deccan and at Sigiriya in Ceylon. The amateurish interest in any art though conducive to its growth can hardly take it to perfection but when art is pursued by the professional class from century to century the tradition and the technique developed by this class has a living force in the history of national art because the living of this class depends on the unremitting pursuit of art and consequently its growth is not left to amateurish whims¹ of the aristocrats or the gentry of a nation, who remain at best only the patrons of the professional artists.

1. Compare Bernier's remarks on the condition of Indian artisans and painters in the 17th century :—

(P. 255-56 of *Travels*, 1891)—“Want of genius, therefore, is not the reason why works of superior art are not exhibited in the capital. If the artists and manufacturers were encouraged the useful and fine arts would flourish; but these unhappy men are

Any change in the artistic taste of these patrons of art had its reaction on the growth of the national art. Are we, therefore, entitled to suggest that with the general artistic degradation of the class of society to which the courtezans tried to please during the course of their profession their interest in painting as an accessory to their trade also declined and ultimately dropped out for good? The arts of singing and dancing having a wider and demonstrable appeal to the average man have still survived in association with the courtezans and even in modern times we have greater attendances at dances and singing parties than at art exhibitions which hardly attract any large numbers even from the so called educated class of the day. ¹

The importance and status attached to the profession of the courtezans during the early history of Indian Culture appears to have been lost in the mediaeval period and they were looked upon as social outcasts ² at least by a section of the society which was more religiously minded, if not by the gay aristocrats who continued their pleasurable pursuits perhaps as of yore.

condemned, treated with harshness and inadequately remunerated for their labour. The rich will have every article at a cheap rate..... How then can it be expected that any spirit of emulation should animate the artist or manufacturers? Instead of contending for a superiority of reputation, his only anxiety is to finish the work and to earn the pittance that shall supply him with a piece of bread. The artists, therefore, who arrive at any eminence in their art are those only who are in the service of the or of king some powerful Omrah and who work exclusively for their patron."

1. Even in the 17th century Bernier noticed and criticized the degradation of artistic taste among the people in India though the professional painters produced good work as is evident from Bernier's remarks :-

"I have often admired the beauty, softness and delicacy of their paintings and miniatures and was particularly struck with the exploits of Akbar, painted on a shield by a celebrated artist who is said to have been seven years in completing the picture. I thought it a wonderful performance. The Indian painters are chiefly deficient in just proportions and in the expression of the face; but these defects would soon be corrected if they possessed good masters and were instructed in the rules of art" (p. 255). The editor quotes a passage from *Ain-i-Akbari*, Vol. I, p. 108, which criticizes the "bigoted followers of the letter of the law" who are hostile to the art of painting and which concludes with Akbar's remarks on painting according to which the painter is forced to think of god in view of his inability "to bestow individuality upon his work."

2. Vide *Epi. Indica*, Vol. XXV, p. 199 ff.—In the Puruottamapurī plates of king Ramesandra of Devagiri dated Śaka 1232 (= A.D. 1310) certain villages are granted by this Yādava king to his minister Puruottama, who gave these villages to certain Brahmins, numbering eightythree. Lines 117-20 contain rules for the conduct of the Brahmins. These villages are to be enjoyed by the Brahmins and their descendants following always the righteous path. "No quarter shall be given to prostitutes; the custom of gambling also shall be prohibited."

The evidence recorded by me in the present paper leads me to infer that the art of painting was associated with the courtezans at least for 1000 years say between B. C. 500 and A. D. 500. In the account of pre-Buddhist pictorial art given by Mr. Ratilal Mehta in his recent book *Pre-Buddhist India*¹ based mainly on the Jātaka Stories,² I find no reference to the association of painting with the courtezans³ but as they were highly accomplished the art of painting may have been practised by them. Dealing with the education of women in those days Mr. Mehta observes⁴ that they knew *writing* and *reading* but "stray examples do not at all justify our inference that the girl's education was even fairly attended to." "Universities like Takkaṣa are only for boys: Girls have no entrance there. And even at home the girl hardly gets any education." Speaking of the art-education of girls Mr. Mehta states that "it is very probable that *music* and *dancing* were

"अथ ब्राह्मणनिदमाः ।

आचन्द्रार्कमिदं भोज्यमेभिरेषां च वंशैः ।

नाप्येवं न च विकेदं सदा क्षम्यार्कवर्षिः ॥ ३५ ॥

वर्ष्यांगनामां सदनं न वेद्यं शु(श्रु)त्रयारोपि निवारणोपः ।

पञ्चादिकं वापि न पारणोपं सत्कर्मनिष्ठैर्भविष्यमेभिः ॥ ३६ ॥ "

Perhaps to stimulate सत्कर्मनिष्ठः which may have been on the decline about A.D. 1300 the above rules were strictly enjoined in the inscription by the Yādava king at least for the Brahman beneficiaries of the grant.

1. Bombay, 1939, pp. 315-316. Some points from Mr. Mehta's remarks may be noted here:—

- (1) The pictorial art seems to have been highly developed. It was called *Cittakomma* (= *Citrakarma*).
- (2) Paintings were drawn on the walls (*bhitti*) as well as on panels or boards (*phalaka*).
- (3) Balls with various designs painted on them are also mentioned (*Cittabhenduka*).
- (4) Walls were carefully plastered and coated with lime and nicely polished (*Sudhānūpanam*) before paintings were painted on them.

2. *Ibid* p. xxiii — Dealing with the age of the *Jātakas* Mr. Mehta states that "the prose stories of the *Jātaka-Aṅgahakāṇḍ* (were) compiled about the latter part of the 5th century A.D." but the verses in the *Jātakas* may be dated "from pre-Buddhist times down to the 5th century A.D." In view of the several stages through which the *Jātaka* stories have passed, as admitted by Mr. Mehta, I am unable to make any definite chronological inference from them.

3. *Ibid*, pp. 294-297 — Mr. Mehta deals with the position of the courtezans here. Three courtezans of Benares viz. (1) *Sāndā*, (2) *Sulāndā* and (3) *Kāḍā* are mentioned— A courtesan was not looked down upon as moral outcast but rose to a high standard through her accomplishments and was respected by the people.

4. *Ibid*, p. 277 — I take this opportunity of requesting Mr. Mehta to trace any reference to the practice of the art of painting either by courtezans or ordinary women in the *Jātakas*. Stories with a view to establishing some definite starting point for the practice of painting by Indian women which prevailed for no less than 1000 years.

the two allied subjects in which women held sway in those days. Whenever a reference is made in praise of woman she is invariably referred to as skilled in *singing* and *dancing* (*kusālā naccagītesu*)."

It appears from these remarks that *dlekhya* or the art of painting was not practised by the average girl of those days and though Mr. Mehta has not noticed its practice by the *ganikās* or courtezans we have nothing in his account of them to combat the suggestion made by me above that *dlekhya* may have been practised by them along with *music* and *dancing*. This is, however, only a suggestion to be verified by close students of Buddhist literature.

In case no evidence is produced by Buddhist and other scholars regarding the practice of the art of painting by woman in the pre-Buddhist period we shall have to presume that the practice originated with the growth of early Indian painting and died a natural death with the decay of that art at the beginning of the mediaeval period of Indian history, say about 900 A. D. But this presumption needs verification by experts in the history of Indian art and cannot be undertaken by a layman like myself at the present stage of my study of these and allied problems.

13. HISTORY OF THE PRACTICE OF MASSAGE IN ANCIENT AND MEDIEVAL INDIA—

BETWEEN C. B. C. 1000 AND A. D. 1900*

I propose in this paper to record some notes on the history of the art of massaging the body as practised in India from ancient times. In all countries massage has been practised as an accessory to athletics as also for medical therapeutics. So far I have not come across any exhaustive study of the history of massage in India. I hope the following notes from varied sources will reveal the importance attached to massage by Indians during the last 2500 years. To understand, however, the Indian art of massage in its wide cultural perspective I have recorded in this paper some notes about the history of this art in foreign countries like Greece, China, the Roman empire, etc. gathered by correspondence with foreign scholars¹ and through my study of published books.

In connection with the history of massage in China² I consulted my friend Prof. L. Carrington Goodrich of the Columbia University.

* Annals (B. O. R. Institute) Vol. XXVI, pp. 85-113.

1. I gratefully record below the following note about massage sent to me by Dr. Vittore Pisani of the University of Milan in his letter of 24-8-1953:—

"Anointing the skin with oil after bathing is already mentioned by Homer (often); that this was made for gymnastic exercise is explicitly said by Thucydides (5th century B.C.) in his *Histories* I. 6.

Massaging the sick was at first practised by the Greek Prodicus of Selymbria according to the Roman author Pliny the Elder in the *Historia Naturalis* XXIX 2. When this Prodicus lived, I cannot say: I haven't been able to find mention of him in the works at my disposal. But Pliny speaks of him as a pupil of Hippocrates: in such case, he would belong to the 5th or 4th cent. B.C. Here is Pliny's passage: "Prodicus Selymbriensis natus, a discipulis eius (i.e. Hippocratis), institvens quam vocant Iatralipticam, reuictoribus quoque medicorum ac mediastinis vectigal invenit. (This Plinius died of course in 79 A.D.). In the "Georgos" of Menander (342-293 B.C.) vs. 60 we read of a young man who took care of an old sick man and "having provided medicines, anointed him, massaged him, cleansed him, gave him to eat", etc. I think that here massaging is to be understood in a medicinal sense.

In such a sense is spoken of massaging by Galenus (129-200 A.D.) VI 151 and 187; further Pliny the younger, in a letter to Trajan (Ep. X 4) recommends him a intraliptice, viz. a massaging doctor: this Pliny lived from 61 to 113 A.D."

2. Thanks are due to my friend Dr. Gerard Lindblom, Director of the State Ethnographical Museum of Stockholm for directing my attention to the following books about Massage and allied topics:—

- (i) Hühnerfauth, *Geschichte der Massage*, 1886.
- (ii) H. Nebel in von Langenbecks *Archiv* XLIV.
- (iii) Wong, K. Chimin and Lien-Teh, Wu, *History of Chinese Medicine*, 2, ed. Shanghai, 1936.
- (iv) Zimmer, Henry R., *Hindu Medicine*, Baltimore, 1948.
- (v) Sudhoff, *Geschichte der Medizin*, Berlin, 1922, p. 432.

I am thankful to him for the following notes about massage in China, which he sent me during his sojourn in India in 1953 :—

11-8-1953 — "Shampooing is something of a problem, because it is not certain just what *MU* means. This character is used very early in Chinese Texts in the I LI, which may go back to the early years of the first millenium B.C. It is used in connection with the preparation of the corpse for burial. The Elegies of *CH'U* or *CH'U T'X'U* dating from about B.C. 300, as I remember, also has the word..... And in the *Shih Chi*, or Historical Memoirs of Ssu-ma Ch'ien (compiled about B.C. 100), one of the first rulers of the Chou dynasty (c. B.C. 1000) is quoted as having used the expression."

24-11-1953 — Here is another item for your file on shampooing in China: In the *Shih* or *Odes*, which date back at least to the 7th century before our era, is a verse which Bernhard Karlgren translates as follows :—

"Since you, my lord, went to the East, My hair is like the flying Artemisia. It is not that I have no grease or washing, But who likes to adorn oneself?"

(See the *Book of Odes*, Stockholm, 1950, p. 43).

The following *Subhāṣita* about shampooing in Indian household is at present current in India :—

In the *Subhāṣitaratnabhāṣḍāgāra*, N. S. Press, Bombay, 1911, there is a section on *Strīpralāhā* (praise of women) in which we find the following verse :—

Page 263 —

“पादस्वाहने वज्री केनासंवाहने फणी ।
जहो माय्यं पुत्रंजीर्णं दधिसंमयने रधिः ॥ १० ॥”

It is really a good fortune of married women (with children) to possess a *vajri* (baked brick) for shampooing the feet, a *phaṇī* (comb) for dressing the hair, and *raṭi* (churning rod) for churning curds.¹

The above verse reflects the ideal of domestic happiness of India married ladies of medieval India. The authorship of the verse is not mentioned by the editors but it seems that the verse is not very old as the words *वज्री*, *फणी*, and *रधि* (now current in Marathi) are used in it.

1. In the foot-note on p. 263 of *Subhāṣitaratnabhāṣḍāgāra* the editors explain the word *वज्री* as “पादस्वयन्निहरणार्थं भास्वितेष्टकासंज्ञः” (a piece of baked brick for rubbing out dirt from the feet). They also state that the words *वज्री*, *फणी*, *रधि* in the verse have double meanings as follows :—

- (1) *वज्री* = baked brick or *Indra*.
- (2) *फणी* = comb or god *Śaṇa*.
- (3) *रधि* = churning rod or *Saa*.

As regards the currency of the practice of *massage* in different parts of India I made inquiries with some friends of mine. Among replies received the following reply dated 9th May 1953 from my learned friend Rao Bahadur Sardar M. V. Kibe, M.A., of Indore (Central India) is noteworthy :—

"Your letter dated the 29th April 1953 has given me the remembrance of 58 years ago. When in 1895, I joined the then Muir Central College (now Allahabad University), I found that everybody in the morning sitting outside of his house was getting himself *massaged*. This was so even on the sands of the Ganges and the banks of the Jamuna. The late lamented Mahāmanā, Pandit Madan Mohan Malaviya, whenever he met me, advised me to get myself *massaged*. The masseurs used *sarso oil* for the purpose. This practice I have found all these years very largely followed in U. P., Delhi, Rajasthan and even in parts of *Madhyabhārata*. At Indore, I know that the Mahārājas and the rich people got their bodies *massaged* every morning and sometimes at night before going to bed. There are expert masseurs¹ in Indore. One person was a famous bone-setter and masseur in this city. One of the masseurs charges Rs. 5/- per day. I found in a Turkish bath at Nice in France a good masseur. As a matter of fact the practice of *massage* is very largely followed even in these days in the parts of the country I have already mentioned. In *Agra* only a few years ago, I found that the masseurs go through the street asking in loud voice if anybody wished to get himself *massaged* at any hours of the day. As you may be aware this practice is mentioned in the *Mṛcchakaṭika*. The masseur mentioned in this play is described as a merchant of Ujjain, who hailed from Bihar (*Magadha*)."

I am thankful to Rao Bahadur Kibe for this interesting information.

E. Norman Gardener in his very scholarly treatise "*Athletics of the Ancient World*," Oxford, 1930, gives some interesting information about *Massage* as practised by the Greeks or Romans. I note below some points from this information which may be compared with the data about *Massage* gathered from Indian sources :—

Page 78— (1) Oil² played a very important part in Greek training.

(2) The Greek oiled himself before and after the bath.

(3) The Greek wrestlers and athletes carefully rubbed themselves with oil before exercise.

1. There are some expert masseurs even in Poona at present—Shri Vamanrao Limaye, popularly known as Maharaj Limaye, who died a year ago, was an expert masseur. He was an athlete in his young days and later practised as a masseur.

2. Compare *Sūtratantrikā* (N. S. Press, Bombay, 1938, p. 507), *Cikhiatāntra*, Chap. 31 :—

"स्नेहसरोज्यं पुष्यः प्राणाथ स्नेहप्रविष्टाः स्नेहस्रावाथ भवन्ति.....गाधाम्बुधोज्ये
रूपयोग्यः ॥ ३ ॥"

- (4) The names *Paidotribes* (boy rubber) and *Aleiptes* (oil) indicate the importance of *Oil and Massage*.
- (5) *Athletes* are sometimes described as "*Those who oil themselves.*"
- (6) In the 5th century every one brought to the gymnasium his own *Oil flask* and *strigil*.
- (7) At times of festival oil was provided free to all competitors.
- (8) In later times oil was supplied free for all who used the gymnasium. Enormous quantities were required.
- (9) A spartan inscription directs that the *gymnasiarch* shall supply daily about a third of pint for each man, three for youth and two for each boy.
- (10) Sometimes the *gymnasiarch* provided oil at his own expense or gave a sum of money as an endowment for the purpose.
- (11) The oil was kept in *amphorae* or in *tanks*. A picture of such a tank is shown on the funeral Stele of Diodorus of Prusa, a *gymnasiarch* (Fig. 42).
- (12) In course of time the provision of oil became a heavy burden for the *gymnasiarch* or even for the state.
- (13) There was a special room where the athletes powdered themselves before exercise. There were special kinds of powder with special virtues.
- (14) The ordinary youths used common earth or sand.

Page 79-82 — Pictures about *Massage*.

Plate 44 — Scene from the undressing room—*Late 6th cent.* Youth pouring oil from an *aryballos* into his hand for oiling himself before going to wrestle.

Plate 45 — Scenes from the undressing room—*about 480 B.C.*—Hanging on the walls are *strigils*, *oil flasks*—groups of *trainers* etc. standing.

Plate 46 — Youth massaging the back of friend—*about 480 B.C.*

Plate 47 — Youths massaging themselves—*about 480 B.C.*

Plate 48 — Youth massaging boxer—*about 3rd century.*

Page 83 — Solon imposed penalty of death on any one who stole from the gymnasium a cloak or oil flask or any other object worth more than ten *drachmae*.

Page 84 — Those who have finished their exercise are scraping off oil and dirt with *strigils* (*Plate 60*).

Plate 59 — Bronze *strigils* and *oil flask* (in the British Museum).

Page 89 — The science of training or gymnastic, which aimed by means of diet, *massage* and exercise at producing the physical condition required for athletic success was developed in the 5th century.

Page 90 — The trainers in the gymnasia are credited with the *invention of medical massage*.

The *Encyclopaedia Britannica* [Vol. 15 (1929) pages 33-34] contains an article on *Massage*. No history of the art of massage is recorded in this article. I note below the following points from this article which are useful for my present history of massage in India :—

(1) *Massage* is a method of treating stiffness or other physical conditions by manipulating the muscles and joints, practised from time immemorial in all parts of the world and employed extensively for medical purposes at the present time.

(2) Sometimes the word "*massage*" is restricted to the rubbing processes, while "*manipulation*" covers all the movements designed to exercise particular muscles or groups of muscles.

(3) Rubbing is of three kinds :—

(i) Stroking, (ii) Kneading and (iii) Tapping.

(4) Oils and other lubricants may or may not be used.

(5) Massage increases circulation and improves nutrition.

(6) Massage restores functional ability to exhausted muscles and removes fatigue.

(7) Massage of the face and neck is the basis of most systems of modern beauty culture.

(8) The revival of massage in Europe and America has given rise to a number of professional operators, male and female.

(9) The operator ought to possess physical strength and a fine sense of touch and resistance. Skill and knowledge are also necessary for the operator.

(10) The standard of personal character necessary for the operator is that required for the nursing profession in general.

(11) Massage should be carried out under medical direction and in proper surroundings.

The article contains a *Bibliography*¹ on *Massage* which is useful to those who desire to study the subject closely.

1. Books mentioned are as follows :—

(i) *Medical Gymnastics and Massage in General Practice* by J. Arvedson, London, 1926.

(ii) *Advanced Methods of Massage and Medical Gymnastics* by I. C. Shires and D. Wood, London, 1927.

(iii) *Massage: Its Principles and Practice* by J. B. Mannell, London, 1920.

(iv) *Theory and Practice of Massage* by Goodell-Copestake, London, 1927.

(v) *Massage and Medical Gymnastics* by E. A. G. Kleen, London, 1918.

I cannot say if any of the above books contain any historical account of massage.

· In the *Hobson-Jobson* by Yule and Burnell, London, 1903, there is an article on SHAMPOO (p. 821) in which the authors record references to shampoo from A.D. 1616 onwards. The remarks on shampoo in this article are briefly noted below :—

(1) Shampoo = To knead and press the muscles with the view of relieving fatigue, etc.

(2) The word shampoo has now long been used familiarly in England.

(3) The Hind. verb is *chāmpnā* (imperative *chāmpo*).

(4) *References describing shampoo without naming it :—*

A.D. 1616 — "Taking thus their ease, they often call their *Barbers*, who tenderly gripe and smite their Armes and other parts of their bodies instead of exercise to stirre the blood. It is a pleasing wantonnesse and much valued in these hot climes."

— Terry (In *Purchas*, ii, 1475).

(5) The process of shampoo was familiar to the Romans under the Empire, whose slaves employed in this way were styled *tractator* and *tractatrix*.

(6) The earliest reference to the practice of shampoo is in *Strabo* (*McCrinkle, Ancient India*, 72) but with the ancients it seems to have been allied to vice, for which there is no ground that we know in the Indian custom.

(7) A.D. 1748 — "Shampooing is an operation not known in Europe and is peculiar to the Chinese, which I had once the curiosity to go through, and for which I paid but a trifle. However, had I not seen several China merchants shampooed before me, I should have been apprehensive of danger, even at the sight of all the different instruments."

— *Voyage to the East Indies* in 1747 and 1748,
London, 1762, p. 226.

(8) A.D. 1750-60 — "The practice of *champing* which by the best intelligence I could gather is derived from the Chinese may not be unworthy particularizing, as it is little known to modern Europeans."

— *Gross* i, 113 (This writer quotes *Martial* iii, Ep. 82 and *Seneca* Epist 66, to show that the practice was known in ancient Rome).

(9) A.D. 1800 — "The Sultan generally rose at break of day : after being *champod*, and rubbed, he washed himself, and read the Koran for an hour."

— *Beaton, War with Tippoo*, p. 159.

(10) A.D. 1810 — "Shampooing may be compared to a gentle kneading of the person and is the same operation described by the Voyagers to the Southern and Pacific Ocean."

— *Wilks, Hist. Sketches, Madras* (Reprint i, 276).

(11) *A.D. 1810* — "Then whilst they fanned the children, or *cham-pood* them if they were restless, they used to tell stories, some of which dealt of marvels as great as those recorded in 1001 Nights."

— *Mrs. Sherwood, Autobio.* 410.

(12) *A.D. 1810* — "That considerable relief is obtained from *Sham-posing*, cannot be doubted; I have repeatedly been restored surprisingly from severe fatigue."

— *Williamson, V.M.* ii, 198.

(13) *A.D. 1813* — "There is sometimes a voluptuousness in the climate of India, a stillness in nature, an indescribable softness, which soothes the mind and gives it up to the most delightful sensations: independent of the effects of opium, *champoing* and other luxuries, indulged in by Oriental sensualists."

— *Forbes, Or. Mem.* i, 35 (2nd ed. i, 25).

In the *History of Medicine* by D. Guthrie, London, 1946, we get the following references to *massage* :—

Page, 11-12 — Speaking of Primitive Medicine Guthrie observes :—

"*Massage*, another means of inducing the evil spirit to leave the body, consisted in stroking the limbs in a centrifugal direction—that is, towards the extremities. Later as devil possession gave place to more enlightened pathology, the direction of the massage changed and was applied in a centripetal direction."

Pages 35-36 — Speaking of *Massage* in ancient China Guthrie states :—

"Among the methods of treatment which have been used in China from very ancient times are *massage* and *acupuncture*. Blind *masseurs* were there employed for the first time. *Acupuncture* consisted of the introduction of long fine needles at various specified points in the body."

I shall now record the evidence of Indian sources about the practice of *Massage* in India.

(1) In the *Śatapatha Brāhmaṇa* 12.8.3.16, which is related to the *Sautrāmaṇi* sacrifice, reference is made to besprinkling the *yajamāna* (sacrificer) with *vasā* (fat) of an animal. Before this besprinkling (*abhiṣeka*) the *yajamāna* is rubbed with fragrant substances. The pertinent extract reads as follows :—

“सर्वसुरभ्युन्मर्दनं भवति । परलो वा एष गन्धः ।
पत्सुरभ्युन्मर्दनम् । गन्धेनैवैनमेतदभिषिञ्चति ॥”

Sāyaṇa's commentary on the above extract reads as follows :—

“सर्वसुरभिषन्मर्दात् उन्मर्दनं उद्धर्तनं यज्ञमानस्य भवति ।
तेन गन्धार्चितसर्वगात्रोऽभिषिञ्च्य ह्यभिषिञ्चयः ।”

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तेन उन्मर्दितसर्वेणामोऽभिषिञ्च्य ह्यपमिषायः ।”

Eggeling's Trans. :—

"A rubbing down (of the sacrificer), with all manner of sweet-smelling substances takes place (before sprinkling him with fat) for such a rubbing down all manner of sweet-smelling substances means supreme fragrance : with fragrance he thus consecrates (anoints) him." (See *Satapatha Br.* according to the text of the Madhyandina School, trans. by J. Eggeling, S. B. E. Vol. XLIV, Oxford, 1900).

The foregoing passage from the *Satapatha Brāhmaṇa* is important for our present history of massage in India. The term *उत्सर्जन*, which is equated by Sāyaṇa with *उद्दत्तन* or rubbing with fragrant substances like sandal (*Candana*), etc. appears to have been current in the time of the *Satapatha Brāhmaṇa* (c. 1000 B.C.). This passage is also important for the history of cosmetics in India.

(2) In the *Mānavagṛhyasūtra*¹ of the Maitrāyaṇīyāsākhā (ed. by R. H. Sastri, G. O. Series, Baroda, 1926, p. 52) we get the following Sūtra (Khaṇḍa IX, Sūtra 26) :—

"अथ गन्धोत्सर्जने वाससी ॥ २६ ॥"

The variant for *उत्सर्जन* in one of the MSS used by the Editors is *उत्सर्जन*. The commentator comments on the Sūtra with this reading. He observes :—

"गन्धोत्सर्जनादि । उत्सर्जनम् उद्दत्तनम् एकैकादिना "

This Sūtra lays down a rule for the *Snātaka* regarding the wearing of a garment after *utsādana*, which the commentator explains as *udvartana* or cleaning the body by the use of perfumed material like sandal, etc.

(3) The *Sāṅkhāyana-gṛhyasūtra* (edited by M. R. Ghoda, Junagad, 1942, p. 171) lays down in Chapter IV, Khaṇḍa 7 rules about the circumstances under which one should not carry on one's study (*adhyayana*). Study is prohibited when one has shaved his hair and beard but has not taken his bath (केसश्मश्रुतिं वापने आस्नानात्), when one is practising *utsādana* (massage उत्सर्जने), when one is taking one's bath (स्नाने), when one is having sexual intercourse (संवेसाथे), when one is applying oil to one's body (अर्चने), etc. The commentator of this *gṛhyasūtra* quotes the following Smṛti texts bearing on this topic :—

"उद्दत्तने मद्यक्षाने चार्चने केसमुत्सर्जे ।" — *Likhita*

"अर्चने मद्युने स्नाने चोत्सर्जने न च ।" — *Viśodmitra*

1. In *Satapatha Brāhmaṇa*, 9.2.1.23, the term *उत्सर्जन* (getting out) is used. My friend Shri C. G. Kashikar thinks that this term has probably nothing to do with *massage* for which the term *उत्सर्जन* is used in later texts.

2. According to B. C. Lele this Sūtra is "older than 4th or 5th century B.C." (see p. 9 of Preface).

(4) The *Kauṣītaka Gṛhyasūtras* (edited by T. R. Chintamani, Madras, 1944, p. 122) in Chap. III, Khaṇḍa 9 prohibit *adhyayana* (study) for a person when he is carrying out *utsādana* (massage of his body), *snāna* (bath), *abhyājana*, (application of oil to his body) and *Samśelana*.

("सह उपवेशनं संवेदानम् । स्तुतिक्रिया संवेदाने उद्भवया च संवेदाने—Comm. of Bhavatrāta). The commentator Bhavatrāta explains उत्सादनम् as उद्देशनम्.

(5) The *Āpastambadharmasūtra* (I, 6, 1) refers to the washing and *Shampooing* of the Guru's feet by the disciple in the following Sūtra:—

"सदा निशायां गुरुं संवेद्यायेत् तस्य पादौ प्रक्षाल्य संवाह्य ॥ १ ॥ "

The commentator Haradatta explains the word संवाह्यम् as मर्दनम् .

(6) In the *Arthasāstra*² of Kauṭilya (Chapter XXI of Book I) we find detailed instructions about the safety of the king. Among these instructions we find the following statement:—

"स्वापकसंवाहकास्तरकरज्जमालाकारकर्म दास्यः कुर्वुः । "

The female attendants were to do the duty of bath-room servants, shampooers, washermen and garland-makers.

Evidently in the interest of the safety of the king's person all professional experts including the *Shampooers* (संवाहक) were kept out in the above manner.

(7) From the accounts of Megasthenes (302 B.C.) we learn that four attendants used to massage Candragupta (322 B.C. to 298 B.C.) with ebony rollers during the time that he was engaged in disposing of cases (see p. 35 of Dr. Mukhopadhyaya's *Surgical Instruments of the Hindus*, Vol. I, Calcutta, 1913).³

"In accordance with Persian custom which had much influence on the Indian Court and administration, Candragupta ceremonially washed his hair on his birthday, which was celebrated by a splendid festival, at which the nobles were expected to make rich presents to their sovereigns" (Strabo XV, 69; Herodotus, ix, 110).⁴

1. Vide p. 35 of *Āpastambadharmasūtra* with Haradatta's commentary, Benares, 1932.

2. Vide p. 27 of *Arthasāstra*, Vol. I, 1923, ed. by J. Jolly, Lahore, 1923 and pages 42-43 of English Trans. by Shama Shastri, Mysore, 1929.

3. See p. 122 of *Early History of India* by V. A. Smith, Oxford, 1914.

4. Ibid, Smith observes:— "As the Persian hair washing festival was celebrated on the King's birth-day the Indian imitation presumably was celebrated on the same occasion (*Persian Influence on Maurya India*, *Ind. Anti.*, 1905, p. 201). The shaven heads, now favoured by most Hindus, were not fashionable in ancient India. The Indians, we are told, "frequently comb, but seldom cut, the hair of their head. The beard of the chin they never cut at all, but they shave off the hair from the rest of the face so that it looks polished" (*Curtius*, viii, 9)."

(8) The *Vijñānsmṛti* (ed. by J. Jolly, Calcutta, 1881, p. 89) in Chapter XXXII, 6 prohibits the following acts with reference to the wife of one's *guru* :—

- (1) Massaging the limbs of Guru's wife.
- (2) Anointing her eyes.
- (3) Arranging her hair.
- (4) Washing her feet.
- (5) Doing other such services for her.

("गुरुवर्तुषां गार्होत्सवाद्न - अङ्गन - केचलंपचयन - पादपद्माब्जमादीनि
न कुर्यात् ॥ ६ ॥ ")

In Chap. I, 43 of this *Smṛti* the consort of god Viṣṇu viz. Lakṣmī is described as "stroking his feet with her soft palms."

("संपाद्यमानांशुनां कन्दमा करलैः कुम्भैः । ")

(9) The *Manusmṛti* (Chap. II, 209, 211) refers to *उत्सादन* in the following stanzas :—

II, 209 —

"उत्सादनं च गार्हत्यां स्नानोच्छिद्यमोक्षणे ।
न कुर्याद्गुरुपुत्रस्य पादपोषाद्यनेयनम् ॥ २११ ॥ "

A disciple should not *massage* (*उत्सादन*) the limbs of his teacher's son. He should not take any part in giving a bath to the teacher's son nor eat the remainder of the food eaten by him, nor wash the feet of this son.

II, 211 —

"अन्यज्जनं क्षापयं च गार्होत्सवादनेष च ।
गुरुवत्स्या न क्षायति केचनानां च प्रसापनम् ॥ २०९ ॥ "

A disciple should not practise the following with reference to the wife of his teacher :—

- (1) Applying oil to her person.
- (2) Bathing her body.
- (3) Massaging her limbs.
- (4) Dressing her hair.

Evidently the disciple is expected to keep himself at a respectable distance from the members of his Guru's family.

(10) In the *Ācārāṅgasūtra*¹ (translated by H. Jacobi, S. B. E. Vol. XXII, Oxford, 1884), which deals with the conduct of Jaina monks, we get references to the practice of massage in the following extract :—
Pages 131-132—(Book II, Lecture 2, Lesson 3) :—

"A monk or a nun should not use for religious postures, etc. a lodging where the house-holder or his wife, etc. *rub* or *anoint* each other's body with *oil* or *ghee* or *butter* or *grease*, for it is not fit, etc. (8).

1. I am thankful to Prof. N. P. Joshi, of Benares for having drawn my attention to the references to massage in the *Ācārāṅgasūtra*.

A monk or a nun should not use for religious postures, etc. a lodging where the house-holder or his wife, etc. rub or shampoo each other's body with perfumes, ground drugs, powder, lodhra, etc. (see II, 2, 1, 8) for it is not fit, etc." (9).

Page 122 — Book II, Lecture 2, Lesson 1 :—

"A mendicant living together with a house-holder's family may have an attack of gout, dysentery, or vomiting; or some other pain, illness, or disease may befall him; the layman might out of compassion, smear or anoint the mendicant's body with oil or ghee or butter or grease, rub or shampoo it with perfumes, drugs, lodhra, dye, powder, padmaka, then brush or rub it clean; clean, wash or sprinkle it with hot or cold water, kindle or light a fire by rubbing wood on wood; and having done so, he might dry or warm (the mendicant's body).

Hence it has been said to the mendicant, etc., that he should not use for religious postures, etc. a lodging-place which is used by the house-holder. (8).

It is clear from the above extracts that the practice of rubbing or massaging the body with oil, butter, ghee, grease, etc. for purposes of health was current among the house-holders in the 3rd century B.C., which is the date of the *Ācārāṅgasūtra* according to Jacobi. The use of massage for therapeutic purposes during attacks of gout, dysentery, etc. indicated in the extracts is noteworthy.

(11) In the *Cullavagga*, *Khandhaka V* deals with daily life of the *Bhikkus* (pages 66, 156 of the trans. in S. B. E. Vol. XI, Oxford, 1885). The following references to *Shampooing* are found in this *Khandhaka*:-

Page 66 — Lord Buddha condemns the practice of rubbing bodies—thighs, arms, breast, and back—against wood while bathing. This practice was current among the *Khabbagiya Bhikkus*. People were indignant at it and they asked "How can the Sakyaputtiya Samanas do so like wrestlers, boxers, or shampooers?"

Page 67 — Lord Buddha condemns the following modes of shampooing current among the *Khabbagiya Bhikkus* :—

- (i) Bathing on a *Attāna* (a sort of shampooing stand).
- (ii) Using a *Gandhabba-hatthaka* when bathing [the editors explain the word as "a wooden instrument in the shape of a hand which was first covered with *Chunam* (fine lime) and then rubbed over the body"].
- (iii) Using a *Kuruvindaka-Sutti* when bathing (the editors explain this word as "a string of beads covered with the *Chunam* made from *Kuru-vindaka* (a ruby coloured stone) and then held at both ends and rubbed over the body").

1. According to the Buddhaghosa *malla-muthikā* = *mutthika-malla*.

- (iv) Using a *Mallaka* when bathing. [According to editors *Mallaka* was "a kind of back-scratcher made (according to Buddhaghosa) by placing together by the roots, hooks made of the teeth of crocodiles (*makara-dantaka*) which had been previously split"]. Buddha allowed the use of a *Mallaka* to a sick man only.
- (v) Use of an *Utkāsika*. [Buddhaghosa explains this word as "uttavatti" which the editors say is unintelligible].
- (vi) The act of shampooing one another.

Buddha allowed the *Bhikkus* only the ordinary mode or *Shampooing with the hand*.

In *Khandhaka VIII* regulations regarding the duties of *Bhikkus* are given. In section 8 of this *Khandhaka* the conduct of the *Bhikkus* in the hot bath-room is prescribed. In this connection we find the following references to *Shampooing* :—

Page 297 — "If possible, *Shampooing* is to be performed for the senior *Bhikkus* in the hot bath-room. *Shampooing* is to be performed for the senior *Bhikkus* in the water also."

The Buddhist canonical text *Cullavagga*¹ (1, 13, 2) records a list of games that were prohibited for the *Bhikkus*. In this list we find among others the following items :—

- (1) Games at dice. (2) Chariot races. (3) Archery matches.
 (4) Elephant riding. (5) Horse riding. (6) Carriage driving.
 (7) Swordsmanship. (8) *Wrestling*. (9) Boxing with fists.
 (10) Dancing with girls, etc.

The word for *wrestling* given in the *Cullavagga* is "*Nibbujjhanti*" which Buddhaghosa (c. A.D. 425) explains as "*Mallayuddham Karouti*."

(12) In his article on "*Religious conditions as depicted in the Nya Documents from Central Asia*" published in the *Journal of the Greater India Society*, Vol. XIV, No. 1 (1955), pp. 12-54 Dr. R. C. Agrawala gives a short account of the religious conditions as depicted in the *Kharoṣṭhi* documents from Chinese Turkestan. These documents belong to the early centuries of the Christian Era. The following references to *Jentāka* (Hot Air Bath) in these documents are noteworthy :—

Page 25 — Document No. 511 — Praises of Hot Air Baths taken by a Buddhist Saint and his disciples— 500 monks bathed in the hot and perfumed water (नामागन्धपरिभाषितम् जलोद्दकम् कुशा).

Page 26 — Document Nr. 511 (obverse) — importance of gifts pertaining to baths.— One who takes such a bath becomes pure in eyes, bright in voice, pure in limbs, tender and good complexioned, longlived,

1. S. B. E. Vol. XVII—*Vinaya Texts*, Part II, Oxford, 1882, pp. 348-349.

free from boils, pimples, elephantitis (?) or itch (न तस्य गण्धपिटका मयसि), pure, and acquires a sweet-smelling body, big-eyed (विष्ठाकनेत्र), golden limbed and of a pleasing aspect.

Page 27 — "One who provides material for the removal of dirt or who donates oil for rubbing (तेलदायक) and one who provides a dry bath be free from fault and impurity."

(13) In the *Carakasamhitā* (I, XV) we get a detailed description of a hospital and its requisites among which an expert masseur (*Samodhaka*) is mentioned in the following extract :—

"सुयोदयवाचककारकरीवाहकमवेकडीरभवेवर्जाय परिचारकात् ।"

The staff of the hospital should consist of servants, able to cook rice and curries well, competent to administer a bath, an expert masseur, trained in raising and moving a patient, dexterous in making or cleaning beds, practised in the art of compounding medicines, etc. (see pp. 35-36 of *Surgical Instruments of the Hindus*, Vol. I, Calcutta, 1913).

In the *Carakasamhitā*, *Sūtrasthāna*, Chap. 5 detailed instructions are given about the following items :—

- (1) **अभ्यङ्ग**— anointing the body, head and feet with oil (verses 78-92).
- (2) **सरीरपरिचारन**— wiping the body clean and applying perfumes to it (verses 93-94).
- (3) **स्नान**— Bath (94).

In Chap. 6, verses 9-18 deal with हेमन्तर्षा or the daily programme of a person during the cold or winter season (hemanta). The following verse prescribes अभ्यङ्ग, उत्सादन (massage) and मूर्च्छि तैल (rubbing oil on the head) during this season :—

"अभ्यङ्गोत्सादनं मूर्च्छि तैलं वेगताकवातपद्मं जनेत् ॥ १४ ॥"

In the *Cikitsāsthāna*, Chap. 23, verse 118, refers to स्नान, अभ्यङ्ग, उत्सादन and the poison administered through them.

In the *Sūtrasthāna*, Chap. 7, verse 23 refers to "संवाहनानि" (shampooing) which the commentator Cakrapānidatta (c. A.D. 1050) explains as follows :—

संवाहनं वाणिना पादादिप्रदेशे सुखं अभिह्वयनं उन्मर्दनं च ।"

Verses 31-35 deal with व्यायाम or exercise. Over-exercise (अतिव्यायाम) is forbidden. The beneficial effects of व्यायाम are given in the following verse 32 :—

"हाचयं कर्नसामर्थ्यं ह्यैवं दुःखसहिष्णुता ।
दोषक्षयोऽभिहितश्च व्यायामानुबन्धात्ते ॥ ३२ ॥"

1. The term उन्मर्दन is used in the *Satapathabrāhmana* 12.8.3.16 as we have noted already.

Verse 31 defining the nature of स्थापाम reads as follows :—

“सरीशेदा वा शेटा स्वीर्यायां वल्लवधिनी ।
वेहृष्याप्यामंभ्याता मात्रवा तं समाचरेत् ॥ ३१ ॥”

(14) The *Sūtrāsāhita*, Cikitsāsthāna, Chap. 31 deals with the use of oils for medical treatment (स्नेहोपवीगिक चिकित्सितं). It observes (p. 507 of N. S. Press Edition, 1938) :—

“शेहसरोऽथं पुष्पः, प्राणाश्च शेहभूयिष्ठाः शेहसाप्याश्च भवन्ति शेहो ।
पानाभुषासनमरितकशितोऽस्त्युत्तरवस्तिनस्यकर्मरूप्यगान्नाम्यङ्गमोत्रनेत्रपयोऽयः ॥ ३ ॥
तत्र द्विचोनिचतुर्विधोऽभिहितः श्लेः स्नेहगुणाश्च ।

तत्र अङ्गमेवो मृद्वे घृतं प्रधानं, स्थापनेभ्यः तिलतैलं प्रधानम् ॥ ४ ॥”

Oil of sesame (तिलतैल) and ghee from cow's milk (मृद्वे घृतं) were used for massaging purposes as stated in the above extract.

(15) In the *Mahābhārata* (Dronaparvan, Chap. 82 — Chitrashala Press, Poona) there is a pleasing description of a prince's doings early in the day. The following verse 10 describes how king Yudhishtira was massaged in the bath-room by 108 bath servants, who then bathed him with sweet-scented water poured out of golden pots :—

“उत्सादितः कषायेण वल्लवभिः सुक्षिप्तितैः ।
वाप्युतः साधिवासेन अलेन स सुगन्धिना ॥ १० ॥”

The explanation of the above verse as given by three commentators¹ of the *Mahābhārata* is as follows :—

(1) *Devabodha* :—

“उत्सादितः उद्दतितः (?) कषायादिना कोप्रादिना वाप्युतः ।”

(2) *Vādirājajīrtha* :—

“उत्सादि(?)तः कषायेणेऽथ कषायो नाम नाना मौषधिरसैः परिस्रष्टैश्च सहितं क्षानीयन्ते कषाय इत्युच्यते, तेन उत्सादितः अंगस्य मज्जितसंज्ञं प्रापितः ।”

(3) *Nīlakṣṇa Caturdhara* :—

“कषायेण सर्वोपप्यादिच्छेदेन ।”

(16) In the *Rāmāyana* (Ayodhyākāṇḍa, Sarga 83, page 315 of N. S. Press edition, 1911) we get a description of the army of Bharata. In this connection mention is made of perfumers (गन्धोपजीविनः), those who administered bath (स्नायकाः), masseurs (रसायकाः), those who burnt incense in the house (पूयकाः) :—

“वन्तकाराः सुधाकारस्तथा गन्धोपजीविनः ॥ १३ ॥”

“स्नायकोच्छायाका वैद्या धूपकाः शौण्डिकस्तथा ॥ १४ ॥”

1. I am thankful to Shri M. T. Sahaasrabudde of the Mahābhārata Dept. of the B. O. R. Institute, for giving me the extracts from the commentaries of *Devabodha*, *Vādirāja* (between A.D. 1575 and 1620) and *Nīlakṣṇa* (between A.O. 1650 and 1700).

The commentator Govindarāja (c. A.D. 1475) explains some terms in the above lines as follows :—

गणोपजीविनः = “ चन्दनकस्तूरीकर्पूरकुङ्कुमादिगन्धद्रव्यविष्णुपजीविनः । ”

स्नापकाः = “ तैलाम्बुहादिस्नानकारिणः । ”

दण्डार्काः = “ अङ्गवर्त्काः । ”

“ उच्छादनं समुत्थेनोद्गहनोद्गतेषु च । ”

—*Vīṭa* lexicon (A.D. 1111).

दूषकाः = “ गृहादिषु भूषवातकाः । ”

Page 339 — In Sarga 91 of the *Ayodhyāhāṇḍa* there is a charming description of the hospitality given to Bharata and his army by the sage Bharadvāja. In this description we find the following verses:—

“ उच्छाद्य क्षापयन्ति स्म नदीतीर्थेषु वधगुणु ।

अप्येकमेकं पुरुषं प्रमदाः सप्त षाट् च ॥ ५२ ॥ ”

(Seven or eight young women administered *massage* to each soldier and administered bath to him on the beautiful river bank.)

“ संवाहन्त्यः समापेक्षु नार्थो रुचिरलोचनाः ।

परिमृज्य तथान्मोम्यं पायवन्ति वराङ्गनाः ॥ ५३ ॥ ”

Beautiful women with charming eyes administered shampoo to the soldiers and made them drink wine in their company after cleaning their bodies.

The commentator Govindarāja explains the words in the above stanzas as follows :—

दण्डार्काः = उद्गतेनं कृत्वा (“ उद्गतेनोष्णादने द्वे ” —*Amara*.

तैलादिना क्षीरमर्दनं कृत्वा ।

संवाहन्यः = संवाहन्यन्वः, पादसंवाहनं कुर्वन्वः ।

परिमृज्य = जकार्मभंगं दण्डादिना परिमृज्य अलंकृत्य इति वा ।

(17) Among the 64 arts and sciences mentioned by Vātsyāyana as accessory to the Art of Love we find the following :—

- (i) Knowledge of military strategy that helps a person to achieve victory over his opponent (वैजयिकीनां विद्यानां ज्ञानम्) p. 34.

Yaśodhara explains :—

Page 41 — “ विजयवयोऽज्ञानाः वैजयिक्यः । दैव्यो मातृप्यस्र । तत्र दैव्योऽपरामिता-
द्वयः । मातृप्यो वाः साहस्यमिष्यः साहसिकाः । ”

- (ii) Knowledge of *Physical Culture and Athletics* (p. 34)

“ स्वायामिडीनां च विद्यानां ज्ञानम् ”

Yaśodhara explains :—

Page 41 — “ स्वायामवयोऽज्ञानाः स्वायामिक्यः शूरायायाः । एताः तिस्रः अज्ञानो-
त्कर्षरक्षणार्थाः नीचार्थाः ॥ ”

Vātsyāyana mentions the art of rubbing and massaging the body and the head, shampooing and dressing the hair as one of the 64 arts in his *Kāmasūtra* (p. 33 of N. S. Press edition by Kedāranātha, Bombay, 1900) as follows:—

Page 33 — “उत्साधने संसाधने केसमर्दने च कौशलम् ।”

Yasodhara explains:— (Pages 38-39) —

“मर्दनं द्विविधं वादाभ्यां इत्याभ्यां च । तत्र वादाभ्यां यन्मर्दनं सप्तुत्साधने
उच्यते । इत्याभ्यां चण्डिरोन्मथनम् उक्तेरामर्दनम् । केसानां तत्र सृषयानासम्
द्वैच सद् व्यपदेशः । सेपादिषु मर्दनं संसाधनम् ।”

Massage (*mardana*) is of two kinds:—

(i) Massage by hands; (ii) Massage by feet.

Mardana by feet is called *utsādana*.¹ *Kesamardana* is the application of oil to the head as the hair on the head are rubbed while the oil is applied to the head. *Mardana* of other parts of the body is called *Samsādhana*.

Speaking of the daily life of the man of fashion Vātsyāyana says:—

Page 48 — “He should bathe every day, get his limbs massaged with oil every alternate day, use soap (*phenaka*) every third day, shave his face every fourth day, and his private parts (pubic hairs) every fifth day and use depilatories every tenth day. He should always stay in a covered place to check perspiration.”

(“नित्यं स्नानम् । द्वितीयेकम् उत्सादनम् । मृतीषकः केनकः ।
चतुर्थेकम् शामुष्यम् । पंचमेकम् श्यामकम् वा श्रत्यापुष्यम् इति भवति ।
सालपाय च संशूलकसा स्वेदापनोदः ।”)

(18) *Samsādhaka* (Shampooer) is a minor character in the drama *Mṛcchakaṭīka* (trans. by Ryder, *Harvard Oriental Series*, Vol. IX, 1905). Act II shows the character of a shampooer or masseur, who gambled and became indebted. He was born in Pāṭaliputra as the son of a house-holder and practised the trade of a shampooer. He had served the hero, Cārudatta, at Ujjayinī. In the conversation between the heroine, Vasantasenā and the shampooer, Vasantasenā calls shampooing ‘a dainty art.’ The shampooer tells her:— “As an art I mastered it. It has now become a mere trade (p. 37).” In view of these remarks it appears that shampooing was a recognised art at the time of the *Mṛcchakaṭīka*. In fact Vātsyāyana in his *Kāmasūtra* includes *Shampooing* in his list of 64 *Kalās* or arts as we have seen above.

1. At present the practice of massage by the use of feet is current in India. The person whose limbs need massage asks another to tread on his limbs (thighs, soles of feet, back, etc.) with gentle pressure. Possibly this method of massage is meant by Yasodhara when he defines उत्सादनम् as massage by the use of feet (पादाभ्यां यन्मर्दनं सद् उत्सादनम्).

(19) Kālidāsa refers to shampooing in his *Sākuntala* (III, 21) —
 “संवाहयामि धरणावुल पद्यताम्री ।”

(20) The lexicon *Amarakośa* (between c. A.D. 500 and 800) records words about massage as follows :—

(Page 453 of N. S. Prasad Edition, Bombay, 1905) — स्थाभ्यर्दनं
 संवाहनम् (III Kāṇḍa, Varga 2).

Bhānuji Dikṣita (c. A.D. 1630) explains :—

“द्वे पादमर्दनानाम् ।”

According to Bhānuji the two words मर्दनं and संवाहनं recorded by Amara mean massage of the feet, etc.

In *Kāṇḍa II, Varga 6* Amara states (p. 279) that the words उद्गतं and उद्गतनं are synonymous — “उद्गतनोत्सादने समे ।”

Bhānuji states that these two words mean the cleaning of the body with materials used for *udvartana* (rubbing and cleaning the body with perfumes (दे “उद्गतनद्वयेन अह्निसंस्तीकरणस्य ।”)).

(21) The poet Bāṇa (c. A.D. 630) after his father's death led a wandering life in the company of friends of his own years. In Chap. I of the *Harṣacarita*¹ he gives a list of these friends towards the close of this chapter. In this list we find a *female Shampooer* of the name *Keralikā* (संवाहिका केरलिका). Evidently she hailed from *Kerala* (modern Malabar).

(22) The Chinese traveller I-tsing in his *Record of the Buddhist Religion in India and the Malaya Archipelago* (A.D. 671-695) translated by J. Takakusu, Oxford, 1896, refers to the practice of *massage* at the Nalanda monastery in the following extracts :—

Page 109 — Chapter XX — Bathing at proper times. —

“The world-honoured One taught how to build a bath-room, to construct a brick pond in an open place, and to make a *medical bath* in order to cure a disease. Sometimes he ordained the whole body to be *anointed with oil*, sometimes the *feet to be rubbed* with oil every night, or the head every morning; for such a practice is very good for maintaining *clear eyesight*² and *keeping off the cold*.”³

1. Vide p. 63 of *Harṣacarita* ed. by A. B. Gajendragadkar, Poona and Eng. Trans by E. B. Cowell, London, 1919, p. 33.

2. The *Carakaśāstrā* (N. S. Press, 1941), *Sūtrasthāna* Chapter 5, verse 91 gives the effects of पादमर्दनम् (rubbing the feet with oil) as follows :—

“जायते लीकृमयै व बलं रक्ष्यै च पादयोः ।

एदिः प्रसादं लभते मातृव्योपशाम्यति ॥ ९१ ॥”

3. On p. 124 of the *Record* I-tsing describes the “conduct towards strangers or friends” (Chap. XXVI). A junior host was required to shampoo the legs of his senior guest :— “If the host be junior to the visitor, he, in honour of his superior, holds the calves of the visitor's legs, then strikes all parts of his body. If the host be senior he strikes his back, but not so far down as his waist and his feet, in order to soothe him”— I understand that such a custom is current among Marwaris at present.

(23) In the *Aṣṭāṅgasaṃgraha* of Vāgbhaṭa (*Sūtrasthāna*, Chap. III dealing with विनियोग) edited by Ramachandrasastri Kinjavadekar, Poona, 1940, pp. 17-18), we get detailed instructions about the following topics :—

- (1) अभ्यङ्ग — Application of oil to head, ears, feet, hair, face, etc.
- (2) व्यायाम — Exercise, which is defined as follows :—
“ शरीरापास्तत्रयत्नं कर्म इत्यायाम उच्यते ॥ १० ॥ ”
- (3) मर्दन — *Massage* (after exercise) of the entire body :—
“ श (व्यायाम) कृत्वा तु सुखं देहं मर्दयेत्तत्र स्वदेहततः ॥ १३ ॥ ”
- (4) उद्धर्तन — Cleaning the body with medicinal preparations :—
“ उद्धर्तनं कच्छरं मेदसः प्रथिकापनम् ।
“ त्विरिच्छत्यङ्गानां त्वचसात्करं वरम् ॥ १६ ॥ ”

This process removes *Kapha*, reduces fat, stabilises the limbs of the body, and beautifies the complexion.

The commentator Indu remarks —

“ कृत्वा च हृदयैः उद्धर्तनं कृत्वा । ”

- (5) स्नान — Bath.

(24) In the *Aṣṭāṅgahṛdaya* of Vāgbhaṭa (edited by Hari Shastri Paradkar, N. S. Press, Bombay, 1939, pp. 26-27) we get in Chap. 2 of *Sūtrasthāna* detailed instructions about *dinacarya* i.e. daily programme of life for healthful living. Among these instructions the author lays down instructions about the following items :—

- (1) अभ्यङ्ग — (verses 8, 9) application of oil to the head, ears and feet (शिरः शवनराशेषु).
- (2) व्यायाम — (verses 10, 11) exercise. The commentator Hemādri (c. 1260 A.D.) states that व्यायाम (exercise) should be taken after अभ्यङ्ग. He then quotes the following verse¹ from the *Aṣṭāṅgahṛdaya* section on चतुर्वर्षा (Chap. III, verse 10 on p. 40) :—

“ बलाङ्गुलीरभ्याङ्गं मूर्ध्नि तैलं विमर्दनम् ।

मिथुदं कुच्छतेः सार्धं पादाचारं च युक्तिः ॥ १० ॥ ”

Hemādri explains the words in the above verse as follows :—

विमर्दनं = कर्माणां शोधनम् massage with hands.

मिथुदं = बाहुयुद्धं wrestling or boxing.

1. *Arugadatta* explains the terms in the verse as follows in his commentary :—

Medical oil like बलाङ्गुली should be used for अभ्यङ्ग. “ मूर्ध्नि तैले ” = application of oil to the head.

विमर्दनं = शरीरलेपापनम् (massage of the body).

मिथुदम् = बाहुयुद्धं (boxing or wrestling).

पादाचारं = पार्श्व विमर्दनं; युक्तिः = अर्धशक्त्या एव. *Arugadatta* thinks that one practicing बाहुयुद्धं and पादाचारं should do these acts without अभ्यङ्ग (“बाहुयुद्धपादाचारयोः च अनभ्यङ्गस्य एव शीघ्रं युक्तम्”).

कुम्भः = मर्दौ athletes or wrestlers.

पादाचारं = पादाभ्यां मर्दनम् massage with feet.

पुक्तिः = मात्राद्यनतिक्रमेण with moderation.

The commentator Yaśodhara explains the term "वत्सापन" in the *Kāmasūtra* as "massage by feet" (पादाभ्यां मर्दनं). If this explanation is correct we get the following equation:—

वत्सापन of *Kāmasūtra* = पादाचारं (*Aṣṭāṅgahṛdaya*) explained as "पादाभ्यां चिमर्दनं or मर्दनम्" by Aruṇadatta and Hemādri.

The practice of taking exercise and wrestling with wrestlers after *ananta*,¹ (anointing the body with oil) prescribed in the *Aṣṭāṅgahṛdaya* (8th or 9th cent. A.D.) appears to have been followed by Kṛṣṇadevarāya of Vijayanagar. It is vouched by Paes the Portuguese historian as we have seen above.

The use of पादाचारं (massage with feet) after wrestling seems to be current even to-day as it was in the 8th or 9th cent. A.D. The association of *massage* with *wrestling* earlier than the 8th century A.D. needs to be proved on textual evidence.

(3) मर्दन— Massage of the entire body should follow exercise :

[" सं (व्यायामं) कृत्वाःपुसुखं देहं मर्दयेच्च समस्ततः ॥ १२ ॥ "]

Hemādri states that Vāgbhaṭa emphasises the value of *mardana* or massage and its being an essential part of *vyāyāma* or exercise (मर्दनविधानं मर्दनस्य व्यायामाङ्गत्वकथापनार्थम्²).

He then quotes the commentator *Jaijjīṣa* on *Sūtrata*:—

" मर्दनमपि व्यायामान्तःपायेव ॥ "

(massage is an integral part of exercise).

Hemādri quotes *Sūtrata* (*Cikitsāsthāna* Chap. 24, verse 43) as follows:—

" व्यायामस्त्रिचक्रान्तस्य पश्चान्मर्दनं तिस्रश्च ।
व्यायमो मोक्षसर्पभित्तिं कुर्वन्तु एव ॥ "

One who has taken exercise to the sweating point and massaged himself with feet (पश्चान्मर्दनं तिस्रश्च) is never touched by diseases just as a lion remains undisturbed by ordinary beasts. The expression " पश्चान्मर्दनं " of *Sūtrata* reminds us of " पादाचारं " used by Vāgbhaṭa.

(25) In the *Bhaviṣya Purāna*, *Brāhmaparva*, Chap. 15, we get very interesting information³ about *massage* to be carried out by a wife for her husband. The wife should attain proficiency in serving her hus-

1. Even horses were anointed with oil. In the *Sālihotra* of Bhoja (c. A.D. 1050) ed. by E. D. Kulkarni, Deccan College Research Institute, Poona, 1953, p. 13 we get the following line under कर्तुव्यां of horses:— " अभ्यङ्गः कटुतेकेन विधातित्थानचःपनम्. "

2. I am thankful to my friend Dr. A. P. Karmarkar, Director, Purkic Research Institute, Belgaum, for drawing my attention to this reference.

band, in shampooing the limbs of his person and in massaging his head. The shampooing for the waist should be gentle and that of the face and other limbs of the body should be done in a comfortable manner suited to the condition of these limbs. The massage for the arms, chest, the back, shoulders, head, and feet should be vigorous, while that for the other parts of the body should be rather gentle. Soft massage is desired for parts of the body which are not fleshy, for the vital parts close to the navel as also the heart, the face and the cheeks. For a person in the waking state the massage should be vigorous, for a person who is half asleep it should be of the middle kind accompanied with stroking. For a person who is having a gentle sleep massage may or may not be administered. For all limbs of the body the massage should be in the contrary direction (viruddha) and especially so for limbs with profuse growth of hair on them. For limbs which are itching and smeared with oil the massage should be carried out with good rubbing. For inducing sleep quickly as also for exciting amorous feeling the following process should be adopted by the wife.

She should scratch gently with her finger nails the different limbs of her husband. Such gentle touch causes in him a thrill of rapture. She should then rub his head and sides and gently scratch them for removing itching sensation on them. Shampooing administered to a person, standing or sitting, in a waking state or in sleep is highly praised as it is very agreeable. Greater degree of massage should be administered by the expert wife when she notices (in the person that is being massaged viz. husband) motionlessness, horripilation of limbs, closing of eyes, offering of particular parts for massage, excitement in the region at the root of thighs, etc., and counter-seizure of her hands. A wife, who pursues such a course of conduct, solely directed to pleasing her husband attains the three ends of human life.

(26) In the *Agnipurāṇa* (Anandashram Sanskrit Series No. 41, 1900, p. 353) we get detailed instructions about massage in Chapter 281 (called "रसादिच्छायाकरणं") verses 26-33, which read as follows :—

“रसाधिकं समं कुर्याच्चरो वातापिच्छोऽपि वा ।
 निवाधे मर्दनं प्रोक्तं विशिरे च समं बहू ॥ २६ ॥
 वसन्ते मध्यमं श्रेयं निवाधे मर्दनोत्थनम् ।
 त्वचं तु मयमं मर्दं मञ्ज्वां च तदनन्तरम् ॥ २७ ॥
 स्नायुर्गच्छिरवेरेषु मस्तिष्य पातीय मांसकम् ।
 हृत्पथी बाहू तथेवैव तथा अङ्गुष्ठे स जानुनी ॥ २८ ॥
 वरिषम्भवेत्यात्रो अत्रु वृक्षश्च पृथिवार ।
 अङ्गुलं चित्तु सर्वेषु निष्पीड्य बभुर्कं तथा ॥ २९ ॥
 मसारापेक्षस्तपीच च क्षेत्रेण वाङ्मनाम् ।
 मावीर्णे तु समं कुर्याच्च सुखवा वीथपात्तरः ॥ ३० ॥

दिनस्य तु चतुर्भागं ऊर्ध्वं तु प्रहराधिके ।
 व्यापारं नैव कर्तव्यं (व्यः) क्षायाच्छीताम्बुना सहस्र ॥ ११ ॥
 वायुष्णं च समं जघ्नाद्दृष्ट्वात्सं न चारयेत् ।
 व्यापारमथ कर्त्तुं हन्याद्वातं हन्यात्थ मर्दनम् ॥ १२ ॥
 क्षान्ने पिसाधिकं हन्यात्तस्यान्ते वाऽऽतपाः श्रियाः ।
 मातप्लेसाकर्माऽऽदी क्षेपस्यापाम उच्यते ॥ १३ ॥
 ह्यथादि महापुराण आग्नेये रसादिलक्षणकथनं नानैकाशीरपधिक-
 द्विषततमोऽध्यायः ॥ २८१ ॥ ”

.. (27) In the *Kāmandakiya Nitisāra* (Cb. XII, v. 45) the king is cautioned against *Shampoos*, who have the opportunity of poisoning¹ him :—

“ सुदृष्यजनकान्तारस्तस्यका व्यपकास्तथा ।
 मसादका मोजकाश्च गात्रसंवाहका अपि ॥ ”

(गात्रसंवाहक = one who shampoos different limbs of the body).

(28) Some of the Indian kings have in their service regular athletes (*mallas*) who massage their bodies regularly. This practice appears to have been current in India from antiquity. King Someśvara in his encyclopaedic work called the *Mānasollāsa* (edited in the G. O. Series, Baroda, Vol. II, 1939) describes the royal bath current in his time (c. A.D. 1130). The actual bath was to be preceded by a vigorous massage with oil by expert athletes (*mallas*) well-versed in the art of massaging (*Saṃvāha-vedibhīb*) as the following lines (p. 81) describe:—

“ औचर्षागात्रसंसिद्धैः स्तुयेर्होषापदैः क्षुभैः ।
 नैर्लैरम्यज्ज गात्राणि प्रहृष्टैः संवाहयेदिभिः ॥ ९३१ ॥
 मृदुहस्तकैः स्वेरं मर्दनं च समाचरेत् । ”

At the close of his section on the enjoyment of women (*yojidbhoga*) Someśvara prescribes the employment of beautiful women for the following items in the daily life of the king :—

- (1) भोजन— Dinner.
- (2) मञ्जन— Bath.
- (3) पादम्यञ्ज— Application of oil to feet.

1. In the *Carakasamhitā* (N. S. Press, Bombay, 1941), *Cikitsāśāstra*, Chap. 23 deals with विषचिकित्सित or diagnosis of *poison*. Poisoning through अभ्यञ्ज and उत्सादिने by a shampooer was possible and its diagnosis is referred to in the *Carakasamhitā* in this Chap. 23, verse 118, as follows (p. 576) :—

“ स्नानाम्बुजोत्सादनवञ्जान्निवारणैर्दिष्टैः
 कण्डूतिक्तोत्पिडकारोयोद्भयन्निमित्तिया घोषाः ॥ ११८ ॥ ”

poisoning through water used for bath or the oil used for massage, either intentional or accidental, was likely to lead to serious results. Caraka gives the symptoms of such poisoning in the above verse.

- (4) मङ्गलार्चन— Massage of the body.
 - (5) शैलसेवा— Shampooing of the hair.
 - (6) दिम्बतन्त्रप्रविष्टेयन— Smearing the body with perfumes.
 - (7) गीतवाद्यश्रुति— Listening to vocal and instrumental music.
 - (8) नृत्यवेक्षण— Witnessing beautiful dances.
 - (9) जलादिवीक्षण— Enjoying water sports, etc.
- (Verses 17 and 18 on p. 154 of Vol. II of *Mānasollāsa*).

(29) In the *Līlācaritra* (c. A. D. 1250) a Marathi Mahānubhāva text containing anecdotes in the life of Cakradhara, the founder of the Mahānubhāva sect, we get the following references to massage (*śardana*):—

Part III, *Pūrcārdha*, Khaṇḍa 2, edited by H. N. Nene, Nagpur, 1937:—

Page 6 —

“ गोसावी पासि मर्दना दीपळीः मादने जाळे । ”

— (description of अनंतचतुर्धोषित)

Page 13 —

“ महावाहसाचे मंग शुरधणे
 “ मग मरोबासा करि पायवरि
 पायेवरि ध्यमनिवृत्ति करवीळी ”

Page 38 —

“ बाबांसि बहुत दीस मादने नाहीं ”
 “ पचनाविदेव मर्दना रेत असति ”

Page 39 —

“ मांकिचा बीकसा छावीळा ”
 “ दूध चरन उटीळा ”
 “ मग पद्मनामि मर्दना दीपळी ”

Page 100 —

“ मग महावाहसां करि ध्यमनिवृत्ति करवीळी ”
 “ नागदेवो मागळा मळेः मग पांथिचे पाडी मज रगाडुं वेहळ ”

Page 116 — Description of the *Dināli* festival celebrated by the Gosāvis of the Mahānubhāva sect at early dawn,

“ सामग्री केळी : बीकसा तेल ”
 “ मग गोसावी पासि मर्दना दीपळीः
 बरळा थिकसाः तेनां तु भागिक पाळनि मळजनासि दीपळाः
 मळजनी दळ्येकांची भांगे उटिळी ”
 “ बीसुगुटी तेल लोकावीळें ”

Page 117 —

“ देसाः गोसावीपांसि मळजनासद्विठ दीपाळीसणु केळा ”

(30) Dr. N. V. Ramanayya in his *History of the Third Dynasty of Vijayanagara* (A.D. 1530-1543), Madras, 1935, pp. 385-388 gives detailed description of the *bath* current at Vijayanagar in the first half of the 16th century. The following points in this description are noteworthy :—

(i) All people took *abhyāṅgana* (Sanskrit *अभ्यङ्गन*) or oil bath once a week preferably on a Saturday.

(ii) The common people took the *abhyāṅjana* at a river or tank, anointing the head and body with gingelly oil and then removing the oil by rubbing themselves with the powder of *mahuva* seed. They then entered the river and tank.

(iii) The middle class people bathed at home with warm water. They got their bodies massaged and anointed with oil by professionals of the courtesan class who entertained the bathers with their humorous conversation.

(iv) The princes and nobles took the *abhyāṅjana* daily just before they took their dinner. Young damsels anointed the head with fragrant oil of *Campaka* flowers; then they carefully disentangled the hair with their finger nails, sprinkling *rose water* over the head now and then. Next they applied the paste called *ajakah* prepared from sandal wood and *usirika* (*phylanthus emblica*) seeds. *Rose water* perfumed with Goa Civet was poured over the head without interruption. The body and the head were then dried clean with a *valipa* or thin muslin cloth. Each process in the bath was performed by a separate person. The women took *abhyāṅjana* in a similar way but before the close of the bath they besmeared their bodies with the paste of *turmeric* and then washed themselves clean.

(v) In summer people bathed with cool water to mitigate the severity of heat.

(vi) The rich and the nobles spent a good part of their time with their women in *dirghikās* or long oblong baths with steps to facilitate descent into water.

(vii) Contemporary literature gives graphic account of the *jala-kriḍā* or water sport of the king of Vijayanagara in company with the zenana ladies. Each bather had a bathing costume consisting of a thin silk garment, which when wet stuck to the body very closely.

Page 125— The Portuguese historian Paes describes the daily exercise¹ of Kṛṣṇadeva Rāya as follows :—

1. The *Vasucaritra* of Rāmarājabhūṣa alludes to the *gariḍis* or the gymnasia of the city (4 : 72). The *Manucaritra* of Allasāni Peddasa mentions also *Sāmugariḍlu* or *gariḍis* where fencing and gymnastic exercises were taught (2 : 43). The *Hastasaikṣitā* (18th century) describes the course of physical and military training (1 : 206), which consisted of 12 kinds of *daṇḍas*, 14 *śisaras*, 32 *śindhas*, 12 *parvadaḥ*, 12 *gatis*, 12 *gāyamaḥas*, 12 *manas*, some kinds of *naṅgukus*, 16 *upasthas*, 32 *procdras*. Dr. Ramanayya thinks that this course must have been in existence long before the 18th century.

"The king is accustomed every day to drink a *quartilbo* (three-quarter pint) of oil of *gingelly* before day light, and anoints himself all over with the said oil; he covers his loins with a small cloth, and takes in his arms great weights made of earthenware and then taking a sword, he exercises himself till he has sweated out all oil, and then he wrestles with one of his wrestlers" (see p. 249 of Robert Sewell's *A Forgotten Empire*).

(31) There is a treatise on *malla-vidyā* or the science of wrestling, called the *Malla-purāna* represented by a MS in the Govt. MSS Library (No. 369 of 1892-9.) at the B. O. R. Institute, Poona. This MS is dated *Samvat* 1731 = A.D. 1675. The 9th *prakarāna* of this work consists of 100 verses. Verses 32, 33 and 34 of this *prakarāna* dealing with *udhartana* or massage and its qualities read as follows :—

“ उद्धर्तनं द्वावसाया सदा वैशोपकारकं ।
 बाह्वरं कच्छरं त्रयोदशमथापि वा ॥ ३२ ॥
 स्वैर्यकरं तथा गण्डकरं धर्मकरं स्थूलं ।
 गौराव-उदयेवैलस्यद्वारमपि धुवं ॥ ३३ ॥
 कन्दूरं मन्धरं सरोषकधरं परं ।
 स्वेदोद्वारनिर्येषं गुणा द्वावसा कीर्तिताः ॥ ३४ ॥ ”

The foregoing notes on the history of the practice of massage in India clearly show that this practice has been current in India for more than 2500 years. It was one of the 64 arts in the days of Vātsyāyana about 2000 years ago. All the medical texts, early or late, mention this art and its value for medical therapeutics. Indian athletes have been practising massage for hundreds of years. When the history of Indian athletics comes to be written it will not be complete without a special chapter on the history of massage. I hope the notes recorded in this paper will be found useful for writing such a chapter with the addition of further material that may be brought to light by scholars interested in the history of Indian Medicine and Athletics.

14. USE OF GANGES WATER BY MUSLIM RULERS FROM A.D. 1300 TO 1800*

The *Caraka Samhitā*,¹ the oldest extant treatise on Indian Medicine, deals in a special chapter² with the properties of different kinds of water. Referring to the waters of rivers the author observes that the waters of rivers having their origin in the Himalayas are holy or wholesome.³ As the river Ganges has its origin in the Himalayas, Caraka's remarks are applicable to the Ganges water, which was then regarded as holy on account of its association with Gods and Sages as also wholesome.

From the earliest medical treatise we now proceed to the latest treatise⁴ on Dietetics of the 18th century, which contains a section⁵ on

* *Annals of Tirupati Oriental Institute*, Vol. I, Part 3, pp. 1-15.

1. Vide p. 506 of Keith's *Sanskrit Literature*, 1928. Caraka, according to tradition was the physician of Kaniska, whose wife he helped in a critical case.

2. This Chapter is called *ambuvarga* (vide p. 159-160 of the *Caraka-Samhitā*, N. S. Press, Bombay, 1922) verse 191 to 212—this Chapter begins with the verse:—

“जम्बूद्विपं सर्वं पतत्येन्द्रं नमस्तदात् ।

तत्पततति चैव देवकलाकपेशते ॥ १७१ ॥”

3. *Ibid.*, verse 205:—

“नद्यः पाषाणविच्छिन्नविद्युन्पाभितोदकाः ।

हिमवत्प्रभवाः पन्याः पुण्या देवर्षिद्विदिताः ॥ २०५ ॥”

Cakrapāṇidatta (about 1060 A.D.) observes that the Ganges water as it comes from the Himalayas is wholesome (“ययो कलशगर्दिमालगभवत्वादेव गाङ्ग पत्येन”). It is evident that Caraka includes *Gāṅga* or Ganges water in the expression “हिमवत्प्रभवा उदकाः.” Caraka also refers to waters flowing from the *Malaya* mountains (मलयप्रभवाः), the *Pāriyātra* (परियानभवाः), the *Vindhya* and the *Sahya* mountains (विन्ध्यसह्याभवाः). *परियान* is the same as *परियान* western part of Vindhya range etc. (see p. 149 of Nundo Lal De, *Geographical Dictionary*, 1927).

4. Vide *Bhojanakūṭāhala* MS No. 594 of 1899-1915 in the Govt. MSS Library at the B. O. R. Institute, Poona. This MS is dated A.D. 1803. The section on Waters is called *Jala-prakarana*. It records severally the properties of waters of the river *Bhāgrathi* (Ganges), *Yamunā*, *Narmadā*, *Sarasvatī*, *Candrabhāgā*, *Madhumatī*, *Satadru*, *Vigadā*, *Sindhu*, *Tāpī*, *Vetravati*, *Peyoṣṇī*, *Vitasā*, *Sarayū*, *Gematī*, *Goddāvari*, *Kṛṣṇā*, *Kṛṣṇaverī*, *Malaprahārā* (= *Malaprahā*), *Bhimarathī*, *Ghaṅgāprahārā* (= *Ghaṅgāprahā*), *Tuṅgabhadrā* and *Kāveri*. The author gives the above names of the rivers unlike Caraka, who only names the mountains from which apparently rivers flow down to the sea.

5. See also *Teyavarga* of the *Aṣṭāṅgārḍaya* of Vāgbhata (8th or 9th century A.D.) *Sūtrāṅgha* Chap. V (pp. 61 ff) N. S. Press, 1939. P. 61—“गङ्गाभु” mentioned in verse 2 is explained by Hemādri (A.D. 1260) as “आकाशगतोयं मेघः आनीतम्” while Aruṅgdatṭa (c. 1220 A.D.) explains it as “वज्रदिगृहीतं गार्ग्यं.” Vāgbhata repeats Caraka's opinion in his line “हिमवत्प्रभवाः पन्याः पन्यास्तान् एव च स्थिताः”; (v. 10) the term “गङ्गाभु” is used to exclude the sea-water as observed by Hemādri (“गङ्गाभु इति सागुरस्य व्याख्येयम्”) but it does include the water of Ganges river.

the properties of waters of different rivers¹ in India. In this section we have the following verse regarding the properties of the water of the river Bhāgirathī or Ganges :—

Folio 75 (Bhojanakusthala)—

“ अथ वादेचम् ॥
 यथा वादेषु वा नीरं वादेपयिति कीर्तितम् ॥
 अथ ज्ञानीरध्याः—
 कीर्तं स्वादु स्वच्छकार्यतर्क्यं पच्यं वाच्यं वाच्यं वाचहारि ।
 मृत्वायोद्व्यंजनं दीपनं च प्रज्ञां चचे वारि ज्ञानीरधीयम् ॥ ”

The water of the Ganges as described in the above verse is white (वीरं), sweet (स्वादु), clear (स्वच्छं), very tasteful (कार्यतर्क्यं), wholesome (पच्यं), fit for cooking (वाच्यं), digestive (वाच्यं), capable of removing all sins² (वाचहारि), capable of removing thirst (मृत्वा), and delusion (योध), stimulating (दीपनं), and last but not least it promotes intellect (प्रज्ञां चचे).

I believe, this description of the Ganges water represents in brief the up-to-date Hindu belief about this water sustained from the time of Caraka to the present day through no less than 2000 years. There would be no dearth of references to the virtues³ of the Ganges water in

1. *Vide Geographical Essays* by B. C. Law, 1917, pp. 42, 84, 85—“The holy river Ganga is often mentioned in *Pāli* and *Sanskrit* Buddhist sources. More than once the Bodhisattvas arrived on the Ganges; on one occasion the river was full to the brim (*Lalitavistara*, p. 407; also cf. *Mahāvastu*, III, p. 201). According to the *Purānas* the Ganga is one of the rivers issuing from the Himavat (see *Mārk. Purāna*, p. 57, 16-18). The *Vāyu* and *Matsya* as also *Vijaya*, *Bhāgavata* and *Padma Purānas* describe the descent of the Ganges. In the *Mahābhārata* as well as in the *Purānas*, the Ganga is invariably qualified as *tripathagā* or flowing in three directions. On the banks of the Ganges Vidura listened to *Śrīmadbhāgavata* read out by the sage Maitreya (p. 218). The *Mahāvastu* commentary mentions *Gangā* among the rivers of Ceylon (p. 74).

2. The *Sāhāsītarasāhkhāṅgāra* (N. S. Press, Bombay, 1911) p. 131 records the effects of a Sultan's trumpets on the wives of his enemies as follows :—

“ गङ्गाम्यधि ह्युत्थाप तथ विःशान्तिस्वनः ।
 स्नातीवारिषुर्गर्भवतनवसक्ती ॥ २९ ॥ ”

These wives of the enemy, sinful on account of the abortions caused by the terrific sound of the Sultan's trumpets, are represented as washing themselves in the water of the holy Ganges as if with a view to wash away their sinfulness. Evidently the enemy of the Sultan is some Hindu king. (For other *Sāhāsītaras* regarding Ganga, vide verse 123 to 144 on p. 9 of this compilation.)

Saint Tukārām (A.D. 1608) addressed a letter to the Ganges (*abhangas* 4320-4322 of *Madhvaṅkar's* edn. Bombay, 1884) in which he calls *मागीरणी* or Ganges as “*महापिपिवासी*.”

3. Jagannātha Paṇḍitarāya of Shah Jahan's time sums up the virtues of the Ganges-water in the following stanza of his immortal *Gaṅgādhārī* :—

“ अज्ञानान्मार्गमूढकृतिषधिरात्रुफिषिक्कान्
 अहस्तानस्तास्त्रिण इरितं निस्तारयेतीन् ।
 विस्मिन्निर्मुच्यन्ति च निरवान्निवर्तितान्
 नरान्मन्त्रं तस्मिन् वन्दे मेघमति ॥ १५ ॥ ”

(*Vide* p. 21 of *Marathi Life of Paṇḍita Jagannātharāya* with *Saṅgita Gaṅgādhārī-Sayajī Sāhityasāhā* No. 127 by Ramrao Martand Bhambarkar, Baroda, 1928).

the Indian literature and it would be worth while collecting all of them in a special monograph as a tribute to the sacred river of the Hindus. What concerns me, however, in the present paper is the estimate of the Ganges water by people of foreign culture like the Muslims and the value they attached to this water in the daily conduct of their lives. As I don't claim a close knowledge of the Muslim Sources which are likely to throw more light on this problem than I can do in this paper, I must rest content with an appeal to Muslim scholars to put together all historical references to the use of the Ganges water at least during the last 1500 years say from A.D. 500 onwards.

Though the Muslims¹ may not have believed in the spiritual qualities of the holy Ganges water, there is possibility of their having entertained a high regard for its medical properties conducive to their physical well-being as noted in early medical treatises like *Caraka*, *Susruta*, the *Ajñāṅgasamgraha*, the *Ajñāṅgahṛdaya* and the like. It is also possible to find some references to the properties² of the Ganges water in the treatises on Medical Science composed by Muslims.

With these preliminary remarks about the importance of the Ganges water recorded in Indian medical texts let us turn to some historical references about its use by Muslims.

In Ibn Battuta's *Travels*³ in Asia and Africa (A.D. 1325-54) he describes the postal service then current in India and mentions couriers carrying post in a rapid manner over long distances. In this context he observes :-

"This post is quicker than the mounted post. It is sometimes used to transport fruits from Khurāsān which are highly valued in India; they are put on plates and carried with great speed to the Sultan.⁴

1. Cf. *Memoirs of Baber*, London, 1826, p. 315 of Erkin's edition— "In Hindustan if you except the rivers, there is little running water. Now and then some standing water is to be met with. All these cities and countries derive their water from wells and tanks in which it is collected during the rainy season." Baber was very fond of fountains and tanks and directed some reservoirs to be built during his conquests in Hindustan (e.g. see p. 370). He refers to one Syed Dekni Sherazi in his employ, who was a water-finder (or hydraulic engineer) in charge of artificial water-works (p. 385).

2. Cf. Gondal, *Aryan Medical Science*, London, 1896, p. 204—"The Indian writers have described the medical properties of waters of the principal rivers, lakes, wells, and mineral springs of the country and their power to cure various diseases. This clearly shows that hydrotherapy was known in India long before it was dreamt of in Europe."

3. Ed. by H. A. R. Gibbs, *Broadway Travellers*, London, 1929, p. 183. Battuta reached Indus on 12th September 1333. He set out for China as ambassador on 22nd July 1342. He dictated his travels from memory in A.D. 1353. He was born on 24th February 1304. Vide my paper on *Identification of Kusul Khan mentioned by Jinaprabhasari in his Vinidha-Tirtha-Kalpa* (Rangaswami Aiyangar Commemoration Volume, 1940, pp. 345-350).

4. Muhammad Taghikh (A.D. 1324-1351) see p. 300 of *Muhammadan Dynasties* by S. Lane-Poole (1925).

In the same way they transport the principal criminals; they are each placed on a stretcher and the carriers run carrying the stretcher on their heads. The Sultan's drinking water is brought to him by the same means when he resides at Dawlat Abad from the river Kank (Ganges) to which the Hindus go on a pilgrimage and which is at a distance of forty days' journey from there."

This reference to the use of the Ganges water by Muhammad Tughlak at Daulatabad in the Deccan appears to me to be curious and important as it illustrates the value set upon the Ganges water by a non-Hindu in the first quarter of the 14th century. In the article on the Ganges in the Marathi Encyclopædia called the *Jānakola*¹ no information about the Ganges water of a historical² or medical nature has been recorded, and it would be interesting to record in this paper such information in the interest of the historical aspects of Indian culture.

Whether this fondness for Ganges water displayed by Muhammad Tughlak was continued by Muslim rulers of the 15th century in Gujarat, Bengal and the Deccan, I cannot say at present, as I have not searched for references to it in the contemporary sources. I find, however, that it appears again at the Court of Emperor Akbar in the 16th century as will be seen from the extract from the celebrated *Ain-i-Akhbar*³ :—

"His Majesty (Akbar) calls this source of life (Ganges water) 'the water of immortality' and has committed the care of this department to proper persons. He does not drink much, but pays much attention to this matter. Both at home and on travels he drinks Ganges water. Some trustworthy persons are stationed on the banks of that river who dispatch the water in sealed jars. When the court was at the capital Agra and in Fatehpore Seekree the water came from the district of

1. Ed. by Dr. S. V. Kethkar, Poona, 1925, Vol. XI.— "गङ्गा." This article is based on the following sources :— (1) Atkinson's *Himalayan Gazetteer*, Allahabad, 1882-1884; (2) Dowson's *Hindu Classical Dictionary*; (3) Skinner's *Excursion in India*, London, 1818; (4) *Vishva-kosha*, and (5) *Mahābhārata*. The Ganges is referred to in the *Rigveda* only twice (Mandala IV and X). It had assumed much importance during the *Mahābhārata* period. It was through Megasthenes that the western people came to know of it. There is a temple of the Ganges at Haridvār. There are images of the Ganges in South India also.

2. Shivaji the Great at the time of his Coronation at Raigadh fort in A.D. 1674 (June) used Ganges water for his bath and gave Gaj Bhatta 5000 *hans* (vide p. 274 of *Shivaji* by Sir Jadunath Sarkar, Calcutta, 1919).

3. Vol. I, p. 55— This extract has been quoted on p. 221 of *Bernier's Travels* (Constable & Co.), London, 1891 in a footnote. "The Mogul Emperors were great connoisseurs in the matter of good water." The *Ain-i-Akhbar* refers to "the department of state, the *Akhbar*, which had to do with the supply and cooling of drinking water, also with the supply of ice, then brought in the form of frozen snow from the Himalayas."

Sarín, but now that His Majesty is in the Punjab water is brought from Hardwar. For the cooking of the food, rain water or water taken from Jamsh and Chenale is used, mixed with a little Ganges water. On journeys and hunting parties His Majesty from his predilection for good water appoints experienced men as water-tasters."

It may be argued that the use of the Ganges water by Emperor Akbar, as vouched by the *Ain-i-Akbari* may have been due to his sympathy¹ for Hindu religion and culture. One is, however, surprised to find that the Grand Mogol, Aurangzeb, a hater of Hindu religion and culture, maintained the tradition of Akbar in the use of the Ganġes water as will be seen from the contemporary remarks of Bernier² in his *Travels*. While describing the expenditure incurred by the Great Mogol Bernier states:— "He (Aurangzeb) keeps in Dehly and Agra..... kitchen apparatus, *Ganges-water* and all the other articles necessary for the camp, which the Mogol has always about him, as in his capital, things which are not considered necessary in our kingdoms in Europe." Speaking of his own use of the Ganges water Bernier observes:—

Page 356 — "I shall not be exposed to any of these inconveniences and dangers, as my Nawab has with marked kindness ordered that a new loaf of his own household bread and a *Sourai* of *Ganges water* (with which, like every person attached to the court, he has laden several camels) should be presented to me every morning. A *Sourai* is that tin flagon of water covered with red cloth which a servant carries before his master's horse."

It appears from the foregoing remarks that the use of the Ganges water for daily consumption was a common practice in the Mogol aristocratic circles at Aurangzeb's court. In his letter written at Lahore on 25th February 1665 which describes the magnificence of the

1. Cf. R. C. Kak, *Ancient Monuments of Ka-Amir*, London, 1933, pp. 33 ff.— Zain-ul-abidin (A.D. 1421-1471) the Muslim king of Kashmir was a great patron of Hindu religion and culture. He studied the philosophy of the *Yogaśāstra* and devoted a considerable part of his time to the study of Sanskrit. Though a Muslim ruler he married a single wife and remained faithful to her throughout his life. This contrasts with the large harems of Oriental rulers of his time.

2. Edited by Archibald Constable & Co., London, 1891, p. 221. Some dates regarding Bernier's biography may be noted here:— Born on 25th or 26th 1620; Travels in Northern Germany, Poland, Switzerland and Italy (A.D. 1647-1650); Matriculates in A.D. 1652 at the University of Montpellier and later becomes Doctor of Medicine A.D. 1654; visits Palestine and Syria A.D. 1655; tends the philosopher Gassendi and is present at his death A.D. 1656-1658; goes to Egypt, A.D. 1659; visits India and accompanies prince Dara as his physician A.D. 1663; in Delhi A.D. 1665; voyages to Bengal with Tavernier and parts company with him in A.D. 1666; A.D. 1667 at Golkonda; at Siraz in Persia 4th October 1667; A.D. 1669 at Marseilles; 25th April 1670 date of French king's licence for the printing of his book; A.D. 1685 visits England; A.D. 1688 dies at Paris at the age of 68 years.

Mogol Camp, Bernier again refers to the *Ganges water* while describing the different tents :—

Page 365 — “The fruits, the sweatmeats, the *Ganges water*, the saltpetre with which it is cooled and the betlé are kept in four other tents. *Bellé* is the leaf (of which I have spoken elsewhere), which after it has undergone a certain preparation is given as a mark of royal favour (like Coffee in Turkey) and which when masticated, sweetens the breath and reddens the lips.”

It appears from these observations that the Ganges water had assumed the same status as a drink at Aurangzeb's court as *tea* or *coffee* at garden-parties given by Governors of our provinces at the present day. I wonder if any of our Congress ministers thinks of reviving this healthy custom in the interest of national health much to the satisfaction of the orthodox patriots, who condemn tea and coffee with all their heart!

From the 17th century we now turn to the 18th century and are surprised to find that a Muslim ruler of a petty principality like *Savanur* should have maintained the Mogul habit of drinking the *Ganges water* during the latter half of the 18th century. The evidence on this point is recorded by Captain Edward Moor who paid a visit to this Nawab of *Savanur* (or “*Shahnvor*” as Moor calls it) between A.D. 1790 and 1794. A description of this visit occurs in Chapter XVIII of Moor's *Narrative*¹ published in London in 1794. Describing the personality of the Nawab, Moor observes as follows :—

Page 248 — “Although no language but Hindi, or Moors, was spoken, he is doubtless skilled in the learned and polite language..... His hookah, which is his constant companion appeared to be of English glass, curiously cut. There were several other pieces of glass of European manufacture, about the room: Asiatics greatly admire the glass of Europe. He never drinks anything but *water of the Ganges*; all other kinds, he says disagree with him: and he has several camels and *abdars* constantly employed in bringing water from that river.”

Moor's note on the use of the Ganges water by the Nawab of *Savanur* may be reproduced here as it makes interesting reading :—

1. *Narrative of the operations of Capt. Little's Detachment and of the Maratha Army commanded by Purseram Bhow (against Tipoo Sultan)* by Edward Moor on the Bombay Establishment, London, 1794.

"The Ganges¹ being a sacred river, its waters are highly revered by pious Hindoos; and in every city in India, Yogees are seen carrying about the streets the water of this river, which is readily purchased by the simple Hindoos, as a purification. A very little is efficacious, being similar in its Sin-expelling power to the *holy water of the Catholics*. Eminent pagodas, however distant are supplied from this stream of sanctity, with water for the idol's ablutions.² We read in Dow (*History of Hindustan*, Vol. I, page 76) that Soonnat, the famous divinity in the temple of that name in the peninsula of Gudjarat, was washed morning and evening with fresh water from the Ganges, although that river is alone one thousand miles distant.³

It must not, however, be understood, that the Nawab drinks it from motives of piety: it is with the Mooselms, in no more religious esteem than any other river; but by many it is constantly drank in consequence of its reputed medical properties, and considerable sums are expended to procure it (see Tavernier's *Indian Travels*, p. 52)."

The evidence recorded above regarding the use of the Ganges water by Muslim rulers, say from A.D. 1300 to 1800 is purely of a contemporary character and hence reliable to a very great extent, unless

1. The *Arthashastra* states that the Ganges shall be worshipped during drought (vide p. 235 of Shyam Shastri's edn., 1929). The officer in charge of the city (*ndgaraka*) shall make a daily inspection of reservoirs of water (p. 164). The king shall construct reservoirs of water (p. 46). According to the *Prakṛya-Sabda-Mahāṅga* (p. 354), the river *Gaṅgā* is mentioned in the *बृहदारण्यकसूत्र* (ed. by Schubring, Leipzig, 1905), the *सामवेदमन्त्र* (p. 27 of Agam. Samiti, Bombay, 1918), the *शुक्लसूत्र* (Jacobi, Leipzig, 1879) and as a goddess in Malayagiri's comm. on *अथर्वसूत्र* (MS).

2. The *Bibliography of Sex Rites and Customs* (by Roger Goodland, George Routledge, London, 1931) records the following references regarding the use of the Ganges water (pp. 90 and 144) —

- (1) *Ganges-water* poured over *lingam* on *Mātra Saptimi* festival (vide p. 107 of Buck: *Pūjās, Fairs and Festivals of India*—Thacker Spink & Co., Calcutta, 1917),
- (2) *Ganges-water* used on important *lingams* (vide p. 278 of *Indian Antiquary*, XXXIX (1910). Article on Religious Song from Northern India by William Crooke (1848-1923).

3. The *Andābhairava Kalpa* (MS No. 43 of 1925-26, B. O. R. I.) which I have proved to be a source for Vijayanagar history (*Karnatak Historical Review*, Vol. V, Part I, pp. 7-18) prescribes that Ganges-water should be used in the worship of *साध्यायन्त्रदी* :— Page 40 —

“वेगादिसदिदानंति गात्रेयं कस्यास्थितम् ।
साध्यायन्त्रदिमि सन्निभिदमाचम्यतां तदा ॥”

contradicted by a stronger evidence of a contemporary character. The chronology of this evidence may be tabulated as follows :—

Muslim rulers using Ganges water.	Regnal Period A.D.	Evidence of	Remarks.
Muhammad Tughlakh	1325-1351	<i>Ibn Battūta</i> in India between A.D. 1333 and 1342.	Ganges water taken to Daulatabad or Devagiri by <i>Couriers</i> .
Akbar	1556-1605	<i>Ain-i-Akbari</i> .	Ganges water used at Agra, Fatepur Seekree and even in Punjab for drinking and cooking—brought on <i>Camels</i> .
Aurangzeb	1658-1707	<i>Bernier</i> in India between 1659 and 1667.	Ganges water used regularly in the camp and the capital for drinking and cooking. Even <i>Bernier</i> got it daily from his <i>Nawab</i> —brought on <i>Camels</i> .
Nawab of Savanur	1792	<i>Edward Moor</i> .	The Nawab drank no water but the Ganges water—brought on <i>Camels</i> .

We have seen above that *Edward Moor* refers in his account of the Ganges water to *Tavernier's Travels*. On a reference to an edition¹ of these *Travels* available to me I find some valuable historical information in *Tavernier's* remarks regarding the use of the Ganges water, not by the Muslims but by the Hindus in the middle of the 17th century as will be seen from the following extracts :—

Pages 230-231 — Pagoda of Benares.

"But above all things, they (the Brahmins) ardently desire to drink the water of the Ganges, because as soon as they have drunk it, they believe, as I have said, that they are cleansed from all their sins. Every day large numbers of these *Brahmins* are to be seen going to the clearest part of the river to fill this water into round, small-mouthed, earthen pots, which hold about a bucketful. When they are full, they are taken to the chief priest, who directs the mouth to be covered with a very fine cloth of fire-colour, in three or four folds upon which he

1. Edited by V. Ball, Macmillan & Co., London, 1889, Vol. II, pp. 225-243, where *Tavernier* describes the temples at Jaganath, *Brama*, *Muttra*, *Tirupathy* (*Tripetty*).

applies his Seal. The Brahmins carry this water at the end of a stick,¹ which is flat like a lath, from which hang six small cords and to each of them one of these pots is attached. They rest themselves by changing the shoulder frequently and they sometimes travel three or four hundred leagues of country with this load, and then sell it, or make a present of it, but only to the richest persons, from whom they expect a liberal reward. There are some of these Idolators who, when they celebrate any festival,—especially when their children are married—drink this water at a cost of 400 or 500 *écus*. It is only drunk at the end of the repast, as we drink hypocras, or muscat in Europe, each (guest) receiving a cup, or two, according to the liberality of the host. The principal reason why this water of the Ganges is so highly esteemed is that it never becomes bad, and engenders no vermin: but I do not know whether we should believe what is said about this, taking into consideration the number of bodies which are constantly being thrown into the Ganges."²

Speaking of marriage ceremonies Tavernier remarks :—

Pages 253-254— "But one of the principal outlays is in the *Ganges water* for those who are sometimes 300 or 400 leagues distant from the river; for as this water is considered sacred and is drunk from religious motives, it has to be brought from a great distance by the Brahmins in earthen vessels³ glazed inside which the Grand Brahmin of Jagannath has himself filled with the cleanest-water in the river, and has subse-

1. These are *Kāvaḍīs* of Ganges water (vide letter No. 37 of Peshwa Daftar Selection No. 18). Sadashiv Naik, the father of Behmji Naik Joshi, mentions in his letter 4 *Kāvaḍīs* of Ganges water sent with Brahmins from Benares for the use of Bajirao Peshwa. The writer wishes that as a result of drinking the holy water of the Ganges the Peshwa would be free from his debts ("श्रीतीर्थसेवन करुन महाराजसि कर्जपरिहार द्वारा etc.")—*Letter No. 128* (before A.D. 1753)—Radhabai writes to Nana Sahib Peshwa that he has received 5 *Kāvaḍīs* of *Gangodaka* or Ganges water sent by Dayaram Parohit from Gadmuḷetvara—*Letter No. 129 dated 24-4-1758*—17 *Kāvaḍīs* of Ganges water brought to Poona from Haridvāra.

2. In a footnote the editor observes —

"The reader will do well not to believe this story, but rather to conclude that much of the water when drunk is in a very unwholesome condition, and is the cause of disease" (p. 231).

3. Cf. *John Marshall in India* (Notes and Observations in Bengal 1668-1672), ed.

by Shafiq Ahmad Khan, Oxford University Press, pp. 157-158 :—

"At this place Hājipur when Hindoos come to wash, which is about November they all carry away some water in pots out of the river Ganges to their friends though 4 or 500 course (KOS) or 1000 miles, and with that water wash their parents who are old or friends that cannot come, and think thereby that all their sins are forgiven for that year. At this meeting of such a great concourse of people and all washing on one morning and endeavouring to wash as much as they can in the place where these two rivers meet several are yearly crowded to death. Into this river Ganges the Hindoos throw most of their dead corps after a little burnt, esteeming it a holy river."

quently placed his seal upon it. This water is not given except at the end of the repast, as I have before said; for each of the guests three or four cupfuls are poured out, and the more of it the bridegroom gives them to drink so is he esteemed the more generous and magnificent. As this water comes from so far, and the chief *Brahmin* charges a certain tax on each pot, which is round and holds about one of our buckets there is sometimes 2000 or 3000 rupees worth of it consumed at a wedding."¹

From Tavernier's account of the 17th century we may go to the 18th century and record here the remarks of a Muslim historian about the use of the Ganges water by the Hindus. This historian composed a *History of Bengal* between A.D. 1786-88. While describing certain features of the country of Bengal at the commencement of this work² he devotes almost a page to the description³ of the Ganges and its tributaries and towards the close of this description observes:—

"And Hindus have written volumes on the sanctity of these rivers. Considering the water of these sacred they fancy that bathing there washes off the sins of a lifetime; especially bathing at certain *ghāṭs* of the Ganges, such as Benares, Allahabad, and Hardwar, is regarded as very sacred. The rich among the Hindus getting their supplies of the Ganges water from long distances⁴ take particular care of it and on certain auspicious days, worship the same. The truth of the matter

1. As contrasted with the use of the Ganges water at marriage ceremonies here described by Tavernier compare the use of the *Gangadaka* at Vijayanagara court in A.D. 1525:—

"According to an inscription of Tirumaladeva, son of Kṛṣṇarāya dated Śaka 1446... (1525 A.D.) a certain Kṛṣṇappa Nayaka is said to have administered *Gangadaka* to Kṛṣṇarāya. It is customary among the Hindus of the south to offer a spoonful of pure water to a dying man and this water is usually called *Gangadaka* (water of the Ganges)."..... "Kṛṣṇarāya seems to have fallen ill about 1525 A.D. and his condition became so critical that his life was despaired of, even the last rite of offering *Gangadaka* was performed but he evidently recovered etc." (vide p. 5 of *Vijayanagar. Third Dynasty* by N. V. Ramenayya, 1935).

2. *Riyazu-s-Salatin*, (Trans. from the Original Persian by Maulavi Ahdus Salam) R. A. Society of Bengal, Calcutta, 1902, Fasc. I. The author of this work is Ghulam Husain Salam.

3. *Ibid.*, pp. 23-24.

4. Cf. the following information as recorded by Mr. N. G. Chapekar in his book *वेदवाच्येण साधनेन*, (Poona, 1937):—

"Page 765—Brahmins at the different *Kṣetras* obtained much *dakṣiṇa* by providing their *parivāra* with Ganges water.

In the month of Phālgun of the year Śaka 1679, A.D. 1757 an expenditure of Rs. 1565 is recorded. The expenditure of bringing 24 *Kṛdāḍis* of Ganges water from Benares to Poona is shown as Rs. 480 at Rs. 20 per *Kṛdāḍi* for 24 *Kṛdāḍis*. The expenditure of taking these *Kṛdāḍis* from Poona to Rameivara is shown as Rs. 960 at Rs. 40 per *Kṛdāḍi* for 24 *Kṛdāḍis*. In A.D. 1779 some money was paid to a *parohita* for bringing Ganges water from Haridvāra.

is that the water of the Ganges, in sweetness, lightness and tasteness has no equal and the water of this river, however long kept, does not stink. There is no river bigger than it in Bengal."

Evidently the Muslim author of the above remarks believes only in the chemical properties¹ of the Ganges water and not in its spiritual properties.

1. My friend Prof. D. D. Kosambi has kindly supplied me the following information about the properties of the Jumna water —

F. D'Herelle: *Le Bacteriophage et Son Comportement*. 2nd edition, Paris, 1926. Page 10 [translation].

Hankin [ref. *Annales de l'Institut Pasteur* 1896, 10.511] shows that he has confirmed the fact that certain rivers of India possessed an extremely marked antiseptic action against bacteria in general and the cholera vibrio in particular. Thus the water of the Jumna contains, when leaving the city of Agra, more than 100,000 bacteria per cubic centimeter three miles lower it contains no more than 90 or 100.

As regards the cholera vibrio in particular, laboratory experiments have given him the following results [the first line gives results for Jumna water filtered through a porcelain candle, those of the second the same water filtered and boiled; the water used for the experiment was sowed with a culture of cholera germs].

Number of germs after:—

	0	1	2	3	4	25	49 hours.
1.	2500	1500	1000	500	0	0	0
2.	5000	4000	6000	10000	6000	10000	36000

The antiseptic action of the water of these rivers was usual, but not constant.

It is to this antiseptic action that Hankin attributes the fact that no one has ever been able to incriminate the ingestion of the water of one of these rivers as being the origin of a case of cholera. Neither have these rivers ever been vectors of any epidemics.

Hankin proves that the antiseptic principle is destroyed by boiling and it would follow from his experiments that it is volatile..... The next page continues with the discussion, and suggests that some Indian bacteriologist should recommence the experiments of Hankin to determine definitively whether the action shown is or is not due primarily to the presence of a bacteriophage.

15. SOME NOTES ON THE HISTORY OF SOAP-NUTS,
SOAP AND WASHERMEN IN INDIA —
BETWEEN B.C. 300 AND A.D. 1900 *

In his remarks on the cleaning of Textiles by the Ancients Dr. Albert Neuburger¹ informs us as follows :

(1) At first, soap wort or *fuller's herb* was used for cleaning materials. Dioscorides (2nd cent. A.D.) makes particular mention of its being used for washing cloths and dresses.

(2) Among the Oriental peoples and among the Greeks and Romans the *fuller's herb* in general use was probably *Gypsophila struthium* whose root still serves nowadays in the East for washing shawls and is exported to our countries under the name of *soap root*. Pliny mentions it under the name *struthion*.

(3) In India, the roots and crushed fruits of various kinds of *soap tree* (*sapindus energinata, maduriensis, saponarius, senegalensis*) were used.

(4) As the Indians still cleanse materials, mechanically by beating them with stones and wooden bammers, it may be assumed that the process was no different in ancient times.

(5) According² to Pliny (XXVIII, 191) soap itself is an invention of the Gauls, who used it not for cleaning but as a means of embellishing the hair. Pliny mentions *two kinds* of soap—a *hard* and a *soft* variety.

(6) Galen (A.D. 131-201)—XII, 170-180 mentions the use of soap for washing. He preferred *German soap* to *Gallic soap*.

(7) According to H. L. Brose, *Theokritos* (Idyll, XV, 30), the bucolic poet of Syracuse (B.C. 285) is the first to mention the use of soap for washing.

(8) Serenus Sammonicus, Physician to the Emperor Septimius Severus (3rd cent. A.D.) mentions *soap* as a means of cleansing but only in a poem which speaks of the treatment of various diseases.

* *Poems Orientalist*, Vol. XI, Nos. 3 and 4, pp. 1-22.

1. Vide pp. 175-176 of *Technical Arts and Sciences of the Ancients*, by A. Neuburger (Eng. Trans. by H. L. Brose), London, 1930—My friend Mr. A. N. Gulati in his letter to me dated 14-10-1946 writes —“I find in the *Dictionary of Applied Chemistry* by Thorpe (p. 144) the *earliest process* of manufacturing *hard soap* (described by Pliny) consisted in boiling oils and fats with causticised wood ashes, the potassium carbonates contained therein, being converted into potassium hydroxide by boiling with lime. The potash Soaps so obtained were converted into Soda Soaps by treating the soap paste repeatedly with common salt.”

2. Vide pp. 116-117 of *Technical Arts, etc.* by Neuburger.

The foregoing remarks lead us to inquire on the following points:-

- (1) Antiquity of the use of the *soap-nuts* in India.
- (2) Use of *sābāṇ* or soap by Indians.

Prof. S. R. Dalgado records the following information about *sābāṇ* or soap in his book¹ published ten years ago :-

SABÃO (Soap)—Dalgado records the names for soap in Asiatic languages including Indian vernaculars and other languages such as *Persian* (Sābūn), *Arabic* (Ṣabon) (Ṣābūn), *Turkish* (Sābun), etc.

A.D. 1644—Bocarro in his report on Portuguese Forts and Settlements in India (MS in India Office No. 197 of B. M. Sloan MSS) mentions *Sabão* :-

"Saffron from Portugal, *Sabão*, porcelain, and some silk cloth."

—(Bocarro, Dec. XIII, p. 588).

Dr. Heyligers observes that the Arabs, rarely make use of soap, and on this account, it is not likely that they could have introduced the term into Malasia. *Dr. Pierre Guiges* (*Journal Asiatique*, Paris, July-August 1905) observes :-

"The Arabic name (*Ṣabon*) is from the Latin *Sapo*, which is itself derived according to Pliny from a Gallic word."

From the way the Portuguese word for soap (**SABÃO**) has been introduced into almost every language or dialect of the East one may reasonably infer that *soap was unknown in India before the arrival of Portuguese*² but Watt says :-

"The art of soap-making has been known and practised (in India) from a remote antiquity the impure article produced being used by washermen and dyers."

1. Vide pp. 314-315 of *Influence of Portuguese Vocables in Asiatic Languages* (G. O. Series, Baroda, 1936).

2. My friend Mr. A. N. Gulati, M.Sc. of the Technological Laboratory, Matunga writes to me on 30-9-1946 :-

"As for your inquiry about Soap.....I can refer you to a line in Guru Nanak's Prayers '*Japji Sahib*' where he mentions the word *Sabās* or *Sābāni* indicating that the word was known in somewhere about Babar's time or the beginning of the Moghul era. This line runs as:-

"मूल पत्तीनी कपड़ होय दे सवुनी लये पोये"

meaning if the cloths get dirty with urine wash them with सवुनी (Soap). This line goes on to say that if the mind gets polluted it has to be dyed with God's name.

This reference should take you to about 50 years older than the arrival of the Portuguese in India."

I am thankful to Mr. Gulati for this valuable reference. See *Madhyayngina Chawitra Keśa* by Chitrav, p. 483—मूलक (A.D. 1489-1538). On 7-10-1946 Mr. Gulati informed me on the authority of Principal Tej Singh of the Khalsa College, Bombay, that the '*Japji Sahib*' of Guru Nanak, appears to have been composed about 1510 A.D. This date does not conflict with Prof. Dalgado's hypothesis that Soap (*Sābūn*) was unknown in India before the arrival of the Portuguese.

(*The Common Prod. of India*, 1908, p. 819). He does not give any reference in support of this statement. There is, however, plenty of evidence to show that the people used in ancient India; as they do even now, soap-nuts, the nuts of the *sapindus trifoliatus* for washing clothes.

In the *Ain-i-Akhbari* (c. A.D. 1590) soap is mentioned in the following remarks about the Soobah of Berar:—

"Lonar¹ is a part of the *Mekhar*² Division..... These mountains produce all the requisites for making glass and soap. Here are salt-petre works." (Page 348 of Gladwin's Eng. Trans., Vol. I, Calcutta, 1897.

Francis Buchanan in his *Patna-Gayā Report* (A.D. 1811-1812), Vol. II, (Pub. by Bihar and Orissa Research Society, Patna) records the following information about soap-manufacture in Bihar:—

Page 617 — Washermen are employed by the Company for bleaching cloth at *Arwal*. They are supplied with soap, lime and soda by the agent of the Company.

Page 618 — At the Company's factory in Bihar washermen carry out bleaching of cloth. The expense of bleaching a hale of cloth including Soap is about 2½ rupees.

"Soap is here made to a considerable extent. The following estimate was given at Bihar where the greatest number of the manufacturer; is settled:—

Take 42 sers tallow, 5 rs.; 15 sers linseed oil 1 r., 10 annas; 2 sers lime 2 annas; 8 sers impure soda, 6 annas; fire-wood, 4 annas;—sers 67; 7 rs. 6 annas;—Produce 84 sers of soap like the lump mentioned in my account of Bhagalpur, 11 rs. Average profit 3 rs. 10 annas.

Each boiler makes this quantity twice a month; but two families, on an average, join about each boiler, as they also burn and sell lime. At this rate the 77 families in this district would make annually 77,616 sers (159,300 lbs.), worth 10,274 rs. This quantity, however, seems to be greatly underrated; and it is probable that, except a few families who make lime as in Behar, each has a boiler; for *Patna Soap is used all over Bengal*. At Gaya indeed, I received a very different estimate, and one which appears more rational. It was said that each man could make 40 sers (72 S. W. each), or almost 77½ lbs. in from three to four days. Allowing for sickness and other avocations, we may calculate that he may make this quantity seven times a month. The material; is

1. Vide p. 691 of *Indian Companies* by G. H. Khandekar, Poona, 1894.—LONAR is a town and place of great antiquity. The salt lake of Lonar produces large quantity of salt. "The salt is chiefly used for the manufacture of country Soap and is exported to considerable distance." Lonar is in the Buldana District of Berar.

2. Ibid p. 169 — *Mekhar* of the *Ain-i-Akhbari* is same as *Mekhar*, 14 miles from Buldana.

and fuel for 40 sera: cost 4 rs. 8 annas, 6 pices, and the value of the article is 4 rs. 8 annas; so that he makes a profit of 6 rs. 12 annas; 6 pice a month and his soap will annually be 6300 lbs. But allowing only one man for each of the 77 houses in the district, the quantity made will be more than three times that stated in Behar, that is to say, above 500,000 lbs. worth about 35,000 rs."

Page 689 — "Some druggists sell soap, and some of those who deal in tobacco do the same; but it is most commonly sold by Paikars, who advance money to the makers, and retail it in any quantity that is wanted. None of their capitals exceed 100 rs. The impure soda called *Sajimatti* is sold by some druggists; but some Paikars retail nothing else, and purchase it from the west-country merchants by whom it is imported. They sell the smallest quantities, and have capitals of from 100 to 200 rs."

Page 695 — Among the artificers who retail in shops or in the streets, Buchanan records 21 soap-makers (in the city of Patna and the district of Behar—see Table No. 41 on p. 765).

Buchanan's remarks recorded above give us a fair idea about the condition of soap industry in Bihar in A.D. 1811-12. If Prof. Dalgado's remark that soap was unknown in India before the arrival of the Portuguese is correct we can easily imagine how the soap industry thrived in India after about A.D. 1500 and reached a somewhat prosperous stage at a time when foreign soap was being sold in the Poona market during the closing years of the Peshwa period as will be seen from the following evidence:—

In the Marathi document¹ of *March 1773* some medical prescriptions are recorded. In these prescriptions we find *Sābāṅ* and other materials prescribed against skin disease. In the same document *Sābāṅ* (soap) is prescribed for being applied to a mare's body.

In another document² of *Saka 1710* (= A.D. 1788) a list of English goods sold in the Poona market is recorded in which we find "सोप विलायती" i.e. *English soap* along with *English nails, paper, locks, etc.*

In the Marathi Dictionary *Sabdakosa* by Y. R. Date and C. G. Karve the following usages of the word *Sābāṅ* are recorded:—

Page 3094 — "साबण, साबू", Arabic "साबू"—

(१) "साबण सांडुनि गेरुसि नादिलें
संवास येतला कापारे"—मु पर्व ३

1. Vide p. 221 of *पेशवाईच्या सावली* by N. G. Chopkar, Poona, 1937—औषधे:—
ब्राजेने औषध made of गंधक, चोंल, मिठावे, आंबे इढद, सरोसार and साबण (Soap) also
"साबण-बोडीने चोपटण्यास:"

2. Ibid, p. 308—सके १७१— "इयमी खिले", "इयमी कागद दस्ते", "इयमी चुका",
"सोप विलायती", "कुलाची येटी इयमी", "कुठप इयमी."

This is a reference to साबुन by the Marathi poet Muktesvara (A.D. 1599-1649)—

(१) " शैले वच स्वल्पिवा साबुनी ।

सकल मन्दाप्री होच हानी"—नव २४. १४८

This is a reference to साबुन in an extract from नवनाथ भक्तिसार by "Dhūṅḍīrāja-Suta Mālu" or Mālu, son of Dhūṅḍīrāja.

The *Bombay Gazetteer*¹ refers to soap-manufacture at different places in the Bombay Presidency but it is difficult to know from these references any historical information about the soap-industry at these places.

The *Imperial Gazetteer of India*² (1886) refers to soap-manufacture at different places in India in the Provinces of Bombay, Punjab, Bengal, Sind, Kathiawar, etc. but no history of these centres of soap-industry is recorded in this Gazetteer.

In Apte's *English Sanskrit Dictionary* (Poona, 1884, p. 400) we find the following entry about SOAP³ :—

"Soap, s. मार्वेन नेप; perhaps भरिष्ट; केविल; (s. berry plant)."

1. *Soap Manufacture* (Bombay Gazetteer)—in *Kaira*, III, 76; in *Panah Mahal*, III, 250; in *Rewa Kanth*, VI, 57; in *Ahmedabad Dist.*, IV, 134; in *Kathiawar*, VIII, 261-62.—*Soap-works* in *Kanara Dist.*, XV, Pt. I, 30, 35.

2. *Soap* (*Imperial Gazetteer*)—Manufactured at *Ahmedabad*, I, 87—*Ankaleswar*, I, 293 (*Country Soap*)—*Bhava*, II, 386—*Edar*, IV, 337 (*Country Soap*)—*Kaira*, VII, 306 (*Soap and Glass* at *Kapedwanj*)—*Kāngra*, VII, 426 (*Soap* at *Hamirpur*, *Dera*, *Nadana*)—*Kāpādwānj*, VII, 439 (*Soap and Glass*)—*Maghiana*, IX, 140 (*Soap*)—*Manghr*, IX, 487 (*Soap-boiling*)—*Mora*, IX, 517 (*Soap*)—*Nadana*, X, 128 (*Soap*)—*Nauwahro*, X, 24 (*Soap and Coarse paper*)—*Parantij* XI, 56, (*Soap factories* producing 178 tons of soap a year)—*Patidigh*, XI, 184 (*Soap* exported beyond *Indus*)—*Rawalpindi* XII, 38 (*Soap*)—*Wadhwan*, XIII, 506 (*Country Soap*, chiefly manufactured)—All these references show actual soap manufacture about 1886 when the *Gazetteer* was published. Leaving aside the references to modern soap factories we have to study the history of the manufacture of *Country Soap* referred to in the *Gazetteer*. Though India possessed all the requisites of Soap-manufacture we cannot say when the manufacture of *Country-Soap* began in India. Was it before the advent of the Portuguese about A.D. 1500 or after it? References to *Sāḥas* in Indian Vernaculars from datable sources would be helpful in clearing up this problem to a certain extent.

3. The *Shorter Oxford English Dictionary* (pp. 1934-1935) records some meanings of Soap and allied terms as follows :—

SOAP = A kind of Soap (1622).

Soap = To rub or smear (1585).

Soap-berry = (1629). The nut of various species of *Sapindus* (esp. *S. Saponaria*) or of *Acacia Catechu* used in certain countries as a substitute for soap.—Any of the trees bearing this fruit (1716).

Soap-boiler = Soap-maker (1594).

Soapery = Soap-factory (1674).

Soap-maker = One who makes soap (1483).

Soap-stone = A massive variety of talc used occasionally as a soap (1581).

Soapwort = (1342). One or other of the herbaceous plants belonging to the genus *Saponaria* which yield a saponaceous principle.

Soapy = (1616). Smear'd with Soap; containing soap (1721).

Apte does not record any usages of the word शबरीमूत्र for soap.¹ We shall see shortly that the words शबरी and फेनिका for soap-berry plant have been taken from the *Amarakola* (between A.D. 500 and 800).

The *Kāmasūtra* of Vātsyāyana (I, 4; p. 48 of N. S. Press Edition, Bombay, 1900) uses the word फेनक (Phenaka) in the following passage:—

“ शिष्यं क्षान्त्वा । द्वितीपकमुत्साद्यन्म् ।
तृतीपकः फेनकः । चतुर्थकमायुज्यम् । ”

This passage is translated as follows on p. 37 of the English Translation of the *Kāmasūtra* by Dr. B. N. Basu and S. L. Ghosh, Calcutta (6th Edn. 1946):—

“He (*nāgaraka* or man of fashion) should bathe every day, get his limbs massaged with oil every alternate day, use SOAP (फेनक) every third day, shave his face every fourth day, etc.”

The commentator Yaśodhara explains the above passage as follows:—

“ शिष्यमिति । शिष्यं क्षान्त्वा । शीघ्रस्वस्नानात् पवित्रस्नानम् । द्वितीपकमिति । पश्चिमदिपुत्रे इत्यनुत्सादनं तदनन्तरं दिनं प्रथमम्, तस्माद्द्वितीयेऽह्नि शरीरप्राथम्यं स्यात् । एकस्नानरित-
मिष्यः । तृतीपक इति । तृतीयेऽह्नि जङ्घयोः फेनको देयः स्यात् । द्विदिनात्परित इत्यर्थः ।
अन्वया ऊर्ध्वजङ्घे ऊर्ध्वयो स्याताम् । चतुर्थकमिति । त्रिः पक्षस्य च इमं शून्यस्नानात्पि वर्षयेदित्य-
वश्यामः । ”²

Dr. G. P. Majumdar refers to the use of *Phenaka* in the *Kāmasūtra* as follows on p. 97 of his *Some Aspects of Indian Civilization* (Calcutta, 1938):—

“He shaves (*āyujyam*), and during his bath he uses a soap-like substance (*Phenaka*) to cleanse his person.”

1. Sir P. C. Ray in his *History of Hindu Chemistry*, Vol. I (1902), page 35 (Chap. II—*Chakrapāṇi*—c. A.D. 1060) records the following “recipe for a Soap used as depila-
tory” :—

“The ashes of *Schreberia swiet* and *casia fist* are to be mixed with lime from burnt shells and lixiviated with the wine of the *au*. The lye is then to be boiled with a definite weight of mustard oil.”

2. Cf. *Carakasamhitā* I, iii :—

“ त्रिः पक्षस्य केचामभुमीमनस्नानं संहारयेत् ”

(see p. 301 of *Surgical Instruments of the Hindus* by G. Mukhopādhyāya, Vol. I, Calcutta, 1913—“*Razor and Shears. The Practice of Shaving*”).

Chandra Chakraberty in his *Cultural History of the Hindus* (Calcutta, 1946, p. 311) renders the *Kāmasūtra* passage under reference as follows:—

“He will take his daily bath; every second day rub the body with oil; every third day cleanse the body with phenaka (Soap-nut=*sopindus mukorosi* and *lawriolium*); shave his beard every fourth day.”

It will be seen from the above renderings of the *Kāmasūtra* passage¹ quoted above that the word फेनक (*Phenaka*) used by Vātsyāyana is understood to mean "soap" or "soap-like substance" but we have no means of knowing the exact nature of this फेनक or its ingredients as Yaśodhara does not explain the word. That this फेनक produced फेन (lather) and possessed cleansing properties will be easily granted. It is possible to suppose that this फेनक consisted of some mixture of Indian soap-nuts, producing lather with cleansing properties. In this connection we have to study the references to these soap-nuts in Indian sources, Sanskrit and non-Sanskrit. I shall, therefore, record below some of these references which I could gather from the sources studied by me.

At present the following soap-nuts are used for cleansing purposes at least in the Deccan:—

(1) फिकेकार् (*Acacia concinna*) common in the Konkan and Ghauts. The legumes are sold and used as soap (vide p. 104 of A. K. Nairne's *Flowering Plants of Western India*, 1894). Nairne calls it "chikakai."

(2) रिता (*sapindus trifoliatus*). There are two varieties. The fruit is used as soap and called soap-nut (see page 66 of Nairne's *Flowering Plants*). Nairne calls it "Ritta" common in various parts; cultivated in Bengal.

I shall now deal with the antiquity of these two plants फिकेकार् and रिता:—

(1) फिकेकार् (*Acacia concinna*)—Mr. K. M. Vaidya in his अष्टांगहृदय-कोष (Trichur, 1936, p. 594) identifies फिकेकार् with Sanskrit सल्ला and records the following information about it:—

- (i) सल्ला is mentioned in the अष्टांगहृदय² (*Sūtra-Sthāna*, Chap. 6) which belongs to 8th or 9th cent. A.D.

1. The *Kāmasūtra* (I. 4, p. 57) again refer. to फेनक in describing वैडम (itiner. art (utor of fashion):—

"मन्त्रिक-फेनक-कषाय-मात्र परिच्छदः.....चौडमर्दः ।"

The above line means "having as his only furniture, a stool (मन्त्रिक), some shampooing material (फेनक) and cosmetics (कषाय)." The commentator Yaśodhara remarks "अज्ञानवशात् फेनककषायौ."

2. Verse p. 101 of Paradkar's Edition of अष्टांगहृदय (N. S. Press, 1939), verse 75 reads:—

"फलोत्सल्लकारिस्तात्रैशाक्युत्ताऽमृताः ॥ ५ ॥"

Arjunadatta (c. A.D. 1220) explains "सल्ला-मालती" and "अरिष्टो निम्बः" etc. *Hemadri* (c. A.D. 1260) explains these words like *Arjunadatta*.

The अष्टांगहृदय (सूत्रस्थान, Chap. VII, Verse 113)—(c. A.D. 625) contains the above उप. "फलोत्सल्लकारि" etc. and the commentator इन्द्र (between A.D. 700 and 1000) explains "सल्ला-प्रसल्ला अरिष्टो-निम्बः"—Evidently the equation 'सल्ला = सल्ला'.

(ii) The lexicon Medini (c. A.D. 1200-1275) refers to it as follows:—

“अथ सप्तला । नवमाला चर्मरुषा गुञ्जासु पाटली क्षियाम्”

(iii) *Ātreya* refers to it:—

“सप्तला चर्मसाह्य च यक्षुफेनरसा च सा ।
शंखिनी तिक्तला चैव यवतिकाः क्षिपीडकः ।
ते गुल्मगरहृद्दीगकृच्छ्रीहोराविसु”

(iv) The commentator of *Suśruta* viz. *Dallaṅa* of Kashmir (c. A.D. 1100) refers to it as “स्नुर्गाम्दः सेदुष्यः”

Another commentator *Jaijñāta* calls it “यवतिकाभेदः”

(v) *Dhanvantarinighaṅṭu*, a medical glossary (before *Amara-kośa*) refers to its names and properties:—

—“सातला सप्तला साठी विद्वला विमलाऽमला ।
यक्षुफेना चर्मरुषा फेना दीसा मरालिका ॥”
—“सातला शोधनी तिक्ता कफपित्तामरुदीपनुत् ।
शोकीद्राण्यानहरा किञ्चिन्मासतहृन्नयेत् ॥”

(vi) *Rājanighaṅṭu* of *Narahari* (c. A.D. 1150):—

—“सातला कफपित्तामी लघुतिक्तकषायिका ।
विसर्पकुष्ठविस्फोटवणशोकिहृन्तनी ॥”

Among vernacular names recorded by Mr. Vaidya I find *सानला* (Hindustani) and *सिकेकार्ही* (Marathi). Arabic name recorded by Vaidya is “सातर.” The Hindustani name *सानला* now current is also found in the *Dhanvantarinighaṅṭu* (say between A.D. 500 and 800).

has a clear antiquity of more than 1000 years. (See p. 55 of *सुश्रुतवचन* ed. by R. Kinjawadekar, Poona, 1940). Pt. Kinjawadekar in his *टिप्पणी* identifies *सानला-सानला* with *सिकेकार्ही*.

1. I am thankful to Pao Bahadur K. V. Hanagawami Aiyangar for the following remarks on the subject of this paper sent to me on 25-9-1945:—

“The Soap-nut is sometimes used to indicate a fruit (flat shaped) of a creeper (thorny) called in Tamil *Sreyakhal*. Dr. Godbole (of Benares Hindu University) is making Soap out of it. It is pounded or reduced to powder and used to rub away the oil, when our folk take an oil-bath (*abhyanga*). Its botanical name is given by Winslow (Tamil and English Dictionary, 1862, p. 468) as *Simosa obtusum*, Rox. The other is known in Tamil as *Puvandi*, the fruit of a tree called *Nrikollān* (*Sapindus emarginatus*, Ains.) which is described by Winslow (op. cit. p. 804) as the notch-leaved Soap-nut tree. *Arista* is equated by Monier Williams with the Soap-berry tree, *Sapindus detergens*, Rox. It is the same as *Phenila*, according to Mr. Williams, who equates it with *Sapindus detergens*, Rox. A plant called *Zizyphus jujuba* and its nuts are also mentioned as *Phenila* by M. Williams (p. 671). The description of the red seed of *phenila* by the *Siddhahalpādruma* seems to suit the *Sreyakhal*. The earliest medical references are given in it. It is described as a medicine for procuring abortion गर्भपातन in the *संस्कृत-सुश्रुतम्*.”

The lexicon *Amarakośa* (between A.D. 500 and 800) refers to सल्लका and its synonyms as follows :—

Kāṇḍa II (वनौषधिवर्ग ४) verse 143—

“ वच सल्लका ।

विमला सल्लका मूर्च्छिका चर्मकवपि ॥ १४३ ॥ ”

(See p. 201 of *Amarakośa*, N. S. Press, 1905).

Bhānuji Dīkṣita (c. A.D. 1630) explains the above extract with the following quotations from the lexicon शेरिणि :—

—“ वच सल्लका । वचमाला चर्मका गुज्रातु पाटली क्षिपाय ”

—“ स्वादिमला क्षिपाय । सातलार्या मुषो अरे निम्बैरेव निचेवचत् ”

—मूयः केना वन्वाः (मूर्च्छिका) । वच ‘ सल्लकायाः ’

“ लीगुम्ब ” अत्रस्य चर्मकास्य इत्यन्धे । ”

(Apte explains लीगुम्ब as milk hedge plant).

(2) रिडा (*Sapindus trifoliatu*s).

Mr. K. M. Vaidya records the following information about रिडा :—

(i) अरिहम् = रिडा or रीडा, soap-berry, soap-nut tree, Indian filbert. (Latin :—*Sapindus trifoliatu*s, *S. Emarginat*u). अरिह also means विच.

(ii) इन्धच्छ ‘ अरीडा ’ इति लोके इति बलनः (c. A.D. 1100).

(iii) Narahari in his *Rājanighaṇṭu* (c. A.D. 1450) records the names and properties of अरिह :—

—“ रीडा कनककलपन्थो गुच्छलो गुच्छपुष्पकः ।

रीडा गुच्छलोऽरिहो महन्वः सुमवीचकः ।

अधीयः सोमचक्रक केनिलो वृक्षसंज्ञकः ।

—“ रीडा कनकलिच्छोऽप्यः बहुः क्षिप्यञ्च वातघ्नित् ।

कच्छः कुष्ठकृत्तलवर्दीपवातकासहा । ”

The *Amarakośa* (II, 4— वनौषधिवर्ग—p. 158 of N. S. Press Edition of 1905) gives two synonyms of रिडा viz. अरिह and केनिल as follows :—

“ अरिहः केनिलः समौ ॥ ३१ ॥

Bhānuji Dīkṣita quotes the following lines about अरिह :—

—“ अरिहो कञ्चुके निम्बे केनिले काञ्चुकधरोः ”

—“ रिहोति । “ रिहं केनाद्युत्थामावे पुति सन्धे च केनिले ”

—“ केनिलोऽरिहावपे । केनिलं यद्वच्छे बहु केनकावपि ”

इ ‘ अरिहस्य ’ रीडा इतिव्यास्य ”

Sarvānanda (A.D. 1159) in his commentary on the *Amarakośa* (T. S. Series, 1915, p. 85) explains :—

“ अरिहस्ये इरिह इति व्याते । केनोमाद केनिलः । ”

Kāśīrasāstra (c. A.D. 1050) explains Amara's line as follows :—

“ न रिप्यनवनेन अरिष्टो रक्षाद्यैः ।

केनाः सप्तित्वात् केनिलः ” ।

कर्मोऽत्र—“ अरिष्टस्तु सुमहत्त्वः कृष्णबीजोऽर्धलाघवः ।

रक्षाबीजः सितकेनः केनिलो गर्भपातनः ”

(See p. 87 of *Amarakośa*, ed. by H. D. Sharma and N. G. Sardesai, 1941).

The *Prakrit-Hindi Dictionary* “वाहप्रसवमहत्त्वव” by Haragovind Das (p. 884) refers to रिडा as follows :—

“ रिड (रिह) फलविशेष, रिडा. ”

Usages :—(1) उक्त ३५, ४ (उक्तताप्यवमन्त्र).

(2) सुक्त ३५, ४ (सुक्तबीजा commentary on उक्तताप्यवमन्त्र).

The reference to रिडा (रिहक) in the *Uttarādhyayanāsūtra* is important as it is the earliest reference to the *soap-nut* from a Prakrit source but it mentions only the colour of अरिहक (fruit) which Jacobi calls *Sapindus Detergens* (S. B. E. xlv, p. 197).

The *lather-producing* property of शिकेकाई (सहला or सातला) was recognized very early as will be seen from some of its names recorded above viz. बहुकेनरसा, बहुकेना, केना, अरिकेना, etc. In the same manner the *lather-producing* property of रिडा (अरिह) was also recognized as we find from its name viz. केनिल used by the *Amarakośa* (between A.D. 500 and 800). So far I have not recorded any text to prove the use of रिडा (*soap-nut*) for washing purposes but the following evidence from the *Manusmṛiti* conclusively proves the use of अरिहक or अरिह or रिडा for cleansing garments :—

Manusmṛiti, V, 118, prescribes the use of water for cleansing corn and garments :—

“ अत्रिस्तु मोक्षणं पीथं बहुना धाम्प्यासस्ताम् ।

प्रक्षालनेन त्वत्त्वानामत्रिः शीथं विधीयते ॥ ११८ ॥ ”

In V, 120 the *Manusmṛiti* prescribes the use of अरिहक (रिडा) as follows :—

“ बीसेयाविष्णोरुषैः कुतरानामरिहकैः ।

अरिहकैरुपहानां बीमानां गौरसर्षपैः ॥ १२० ॥ ”

1. Bühler translates the verse as follows :—

“The manner of purifying large quantities of grain and of Cloth is to sprinkle them with water; but the purification of small quantities is prescribed (to take place) by washing them.” (S. B. E. Vol. XXV, 1886, p. 189-190).

2. Bühler translates this verse as follows :—

“Silk and woolen stuff with alkaline earth; blankets with pounded *Ariṣṭa* (fruit); *Aśīpaṅga* with *Bel* fruit; linen cloth with (a paste of) yellow mustard.”

This verse gives us a fair idea about the use of *materials* used for cleansing garments of different kinds by ancient Indians. I may, therefore, make some remarks on them as follows :—

(1) ऊय is to be used for cleaning कौशेय and कायिक garments. कौशेय is silken garment. कायिक is woollen garment (अपरोमनिर्मित कस्बकं). It was also called रल्लहः (रोमकेशलः)—*Halāyudha* lexicon :—

“एकार्या कारिकः कौशेय-रल्लह-उर्जायु-केशलाः”

ऊयक or ऊयः is saline earth or क्षारमृत्तिका. It was found near Benares in plenty at a place called बहतरवेण according to *Dallana* (c. A. D. 1100) :—

(ऊयकः क्षारमृत्तिका चारामनीसमीपे बहतरवेणो वायुद्वयेन भवतीति ब्रह्मणः).

Bühler observes about some words in the above verse as follows :—

“अरिष्टे i. e. *Sapiadus detergens*, the Soap-berry tree. अशुषट् means according to Gov. Nand. and Nār. “cloth made of thinned bark, according to Kull. and Rāgh. upper garment for women (*Sāris*) made of fine cloth (पट्टसाटक पट्टाटी).” (Ibid, p. 190).

I note here some remarks of the commentators of the *MaṇuSmṛiti* on V, 120 —

(१) मेघानिधि explains ऊयः as “कायनमृदः”. He further states that अरिष्ट etc. are to be used to remove fatty spots on garments (स्निग्धादित्ये सति उदकेन एतेषां श्लथ्मांश्चिप्येन सेतोन्धेदनादि कर्मण्यम्).

(२) सर्वज्ञानशेषण explains ऊयैः as “ऊयमृद्विः”

(३) कुन्डक explains ऊयैः as “क्षारमृत्तिकाभिः” and अरिष्टैः as “अरिष्टमृद्वीः”—
He explains गीरमर्षैः as विटशेनमर्षयः.

(४) मदन explains अरिष्टैः = “केलकः” and अशुषट् = “किन्करल”

(५) रामचन्द्र :— अरिष्टः = “अरिष्टमृत्तिकादिनोदकैः”
and गीरमर्षैः = “गीरमर्षमृत्तिकादिनोदकैः”

(६) गणपानन्द :— ऊयैः = “क्षारमृत्तिकादिभिः”
अरिष्टैः = “अरिष्टमृत्तिकाभिः”
गीरमर्षैः = “विटशेनमर्षयश्चक्षारमृत्तिका (शुद्धिः)”

As regards the use of ऊय (saline earth) for washing silk garments I have to invite the attention of readers to the following use of the ash of the plantain for whitening yellow silk, mentioned by Tavernier, *Travels*, Vol. II, p. 4 (London, 1889) :—

“This silk of Kasimbazar is yellow..... but the people of Kasimbazar know how to whiten their, with a lye made of the ash of a tree which is called *Adam's fig* (*plantain*) which makes it as white as the silk of Palestine.”

The Editor states that the ash of plantain contains *potash* and *soda salts* as also *phosphoric acid* and *magnesia*.

On p. 6 Tavernier refers to the custom current at Berada, Broach and Navat ri of steeping *crude cotton cloth* in lemon juice for bleaching purposes. He also states that the people of Sabā and Abyssinia do not use SOAP. As regards Tavernier's reference to the practice of using the ash of plantain tree current at Kasimbazar I have to state that this practice is very old. Kauṣilya (*Arthashastra*, Book II, Chap. XII) mentions the use of *Tikṣas* for removing impurities of metal ores. A commentator explains तीक्ष्णसारा as the combination of the ash of plantain tree, *apāmdruga* (*Achyranthes Aspera*), barley and Sesamum, etc. (Vide f. n. 1 to p. 85 of Eng. Trans., 1929).

Hindi—शारंगिणी. शिवदीपिकाकार calls it “कहरनमक.” बर्हांगद्वय (8th or 9th cent. A.D.) स्वस्थान chap. 15, 23 mentions कणक :—

“ऊषकस्यापके हिन्दु कालीसहस्रसम्भवम् ।
ससिलजगु रुम्भ्यमगुम्भमेवःकडापदम् ॥ २१ ॥”

Aruṇodatta explains कणक as “बृषक, कहर इति प्रसिद्धः” and *Hemādri* explains कणक as “शारंगुषिका.”

The *Amarakota* (II, 1) verse 5 explains कण as शारंगुषिका.

(2) **शोफल**—Bel fruit (see p. 392 of the बर्हांगद्वयकोष by K. M. Vaidya). Mr. Vaidya records शोफल and बेल as Hindi names of *Agile marmelos*, which is cultivated throughout India and said to be wild in the Deccan. The pulp of the fruit is much used in dysentery (see p. 48 of Nairne's *Flowering Plants*).

The *Manusmṛti* prescribes the Bel fruit for cleansing बन्धुपट्ट or *cloth made of thinned bark* as explained by commentators. According to the *Pharmacopoeia of India* by E. G. Waring (India Office, London, 1868) p. 45 the Bel fruit contains tannic acid. Perhaps this tannic acid of the pulp of the Bel fruit, when applied to bark garments, may have been found useful in giving proper tone to these garments.

(3) **गौरसर्प**—White mustard (see p. 601 of बर्हांगद्वयकोष). The *Bhāṭṭoprahāla* (c. A.D. 1550) states :—

“गौरसु सर्पः प्राज्ञैः सिद्धायै इति कथ्यते ॥”

Manusmṛti states that शोम or linen cloth is to be cleansed with *white mustard*. The commentators say that linen is to be washed with water mixed with pounded white mustard (गौरसर्पसहितोष्णैः). In Waring's *Pharmacopoeia* (1868) p. 23, *White Mustard* (*Sinapis alba*) is mentioned.

It is for chemists to say what action was produced by शोफल, गौरसर्प कण, etc. on the different textiles, for cleaning which these materials were used by ancient Indians about 2000 years ago.

From the *Manusmṛti* we may now pass on to the *Yājñavalkyasmṛti* (Chap. I—प्राकारपत्राय). The *Dravyasuddhi-prakarṇa* (p. 261 of Anandashrama Edition, Vol. I, 1903) of Chap. I of this *Smṛti* practically repeats the verse of the *Manusmṛti* v. 120 with some additions¹ as follows :—

1. The use of *cow's urine* (गोमूत्र) for cleansing woolen and silken garments may be noted. Dr. Neuburger (p. 175 of *Technical Art*, etc.) observes :—

“In India the roots and crushed fruits of various kinds of soap tree were used. Moreover, *urine*, which these washers or millers, who were the *fullones* of the Romans, collected in pitchers which had been placed for use at the street corners served as a *bleaching* material after it had been decomposed in consequence of its content of *ammonia*, it removed fat and also acted as a cleansing agent. This cleansing action was further increased owing to the *fat becoming partly saponified* by the ammonia that is soap

“लोपेयद्रुकोद्भूतैः कृष्णवर्णविष्ण्वीरिण्यम् ।
सर्वाङ्गीरुद्राई सारिदैः कुलं तथा ॥ १८१ ॥
सर्वात्मनिः क्षीरं पुनःपाकेन कृष्णवत् ॥”

The commentator *Aparārka* explains the words in the above passage as follows :—

कृष्णः = कृष्णवर्णः

क्षीरं = विष्णुः

सर्वाङ्गीरुद्राई = विष्णुः

(Apte's Dictionary explains विष्णु as “fine silken garment”).

सारिदैः = (१) विष्णुः

(२) वैश्वदेवः

क्षीरं = गोमूत्रं, प्रसारीयं

कुलं = पार्ष्णीयं कृष्णवर्णवत् कृष्णवर्णम्

क्षीरं = कर्णवर्णं वत्

Aparārka quotes from various texts¹ on the question of the purification of garments and other materials. Those who are interested in

was formed.” On p. 115 Dr. Neuburger states that the ancients were not, however, aware of the chemical action involved in the above process. H. L. Brose states (p. 176 f.n.) that *urine* was used in England upto 40 years ago for scouring cloth.

Kautilya in his *Arthashastra* (Book II, Chap. 12, p. 85 of Eng. Trans., 1929) refers to the use of the *urine* of the Cow and other materials for removing the impurities of metallic ores.

1. I record here some of them partly :—

देवसः— “कर्णाडीश्वरुतयाः क्षीयसुद्रुक्तयाः ।

कल्पाया अमनयेते क्षोषणप्रोक्षणादिभिः ॥

तन्मेषेभ्यस्तुच्छन्नामन्त्रेभ्योच्यतेः लोकेः ॥”

हारीतः— “सं ससर्गं प्रमनेन शुद्धिः”

शत्रिः— “उदधिद्—कर्मकर्मवैवेद्य कर्णमकन्याम् ।

स्नेहसम्पुष्पमाधोमर्दनेर्गुरुणामुर्धामवानाम् ।”

(उदधिद् = Butter-milk; कर्णमकन्या = earth from the ant-hill).

विष्णुः— “पद्याद्यैः कुमोमिच्छाम्” (पद्याद्य = Lotus seeds)

हारीतः— “क्षोषणोभा अर्षासाम्पयानां, पुनःशोषणारिः क्षीयसरोर्णानां, पुनःशोषणारिः कर्मकन्याम् etc.”

(What is पुनःशोषण ? The *Maṅgalya* mentions शोषण as a Plant growing on the summit of the Himalayas with a bulbous root like garlic and with leaves round and long.— See p. 241 of *अष्टांगहृदयकोष*).

कर्मः— “वैश्यां वृद्—मन्त्र—गोमूत्र क्षोषणैः”

शत्रुपुत्र— गोमूत्रस्यारिः prescribed for cleansing.

अमनः— “कुम्भजलेऽपुनःशोषणैः शोषणैः कर्मविष्णुविलसकर्मकन्यानां वैश्यां शोषणम् ॥”

the history of the materials employed by ancient Indians as cleansing agents may study these texts for what they are worth.

The materials mentioned by Aparārka as cleansing agents on the strength of various Smṛti texts may however, be briefly noted here :—

(1) उष्णचारि (hot water); (2) मल्ल or ashes; (3) चूर्ण or powder of बब, गोदूध, कृताय, माष, मसूर, सुत्र, गोमय; (4) बज्र; (5) कृत्तल; (6) Objects of कालाचिन्त (black iron) to be cleansed by rubbing with "बाण उष्णसिन्धवा"; (7) तापमय (heating); (8) पृथ्वी (earth); (9) क्षार; (10) गोमूत्रजल; (11) सिन्धवा (sand); (12) मात्स्योदक; (13) बभ्रुवर्षण; (14) गोदूत्रक्षार; (15) गोपादौ: वर्षण (rubbing with cow's hair); (16) रजतार्कं जर्क for woolen and silk garments; (17) सुवर्णार्कं जर्क for cotton garments; (18) Exposure to air, fire, moon's and sun's rays in the case of costly woolen garments; (19) बरिष्ट (soap-nut); (20) बबुल (Marathi विणमवेष्ट—*Balanites roxburghii*); (21) लण्डक; (22) लण्डक (mustard).

The ancient Aryans had mastered the art and science of social and individual hygiene to a remarkable extent as will be seen from the above list of purificatory materials (सौचद्वयानि) and their specific uses prescribed in the *Dharmasūtra* texts.

Our cursory study of the antiquity of soap and soap-nuts raises the question about the use of any of the above materials by professional washermen of ancient India. We have reason to believe that these washermen must have availed themselves of some of these materials prescribed by the Smṛtis for cleaning different kinds of garments.

The washerman was called रजक. He was called कृत्त (artist) and is mentioned as such in the following verse, which mentions the five artists—(1) Carpenter, (2) Weaver, (3) Barber, (4) Washerman and (5) Shoe-maker :—

“सद्वा च तन्त्रवापयक मपितो रजकस्तथा ।
वस्त्रमध्यमकारक कारवः सिम्बिनो मताः ॥”

The *Yājñavalkya-Smṛti* (I, 187) states that the work of these artists was pure (कालहस्तः शुचिः). *Aparārka* explains this statement :—

“कारः सिन्धी रजकतन्त्रवापयिः । तद्वत्कृत्तं चूर्णवर्षणैः”

and further

“तेन रजकतेषकारिभिः संस्त्रुतां वस्त्रादीनां...शुचिचयेव”

In spite of the social service of the washerman recognized by *Yājñavalkya* he comes up for punishment in the following verse of *Yājñavalkya* (II, 2:8) :—

“वसानशील्यनाम्नाप्यो मेत्रकस्तु परोद्भुक्तम् ।
सिन्धवावक्रवाधानपाचितेषु पनाम्बुज ॥ २३८ ॥”

In this verse fines are prescribed for the malpractices of the washerman such as *वचनम्* (*वाचनेन दातव्यं* giving clothes on hire), *वचनम्* (*वचनम् प्रदायित्वेन दातव्यं*), *वाचितं* (*वाचितं*), *विक्रय* (sale of clothes), etc.

The *Manusmṛiti* (VIII, 396) lays down the following rules against the malpractices of the washerman :—

“*वाचनीयकृते कृते वेदिन्यायेनः कर्तव्यः ।
नच वाचांसि दासोसिः निर्दिश्य दासयेत् ॥ ३९६ ॥*”

Bühler's translation :—

“A washerman shall wash (the clothes of his employers) gently on a smooth board of *Salmali* wood; he shall not return the clothes (of one person) for those (of another) nor allow anybody (but the owner) to wear them.”

The washerman was artist (कर्म) indeed in times of yore as he is today but the two *Smṛitis* have not prescribed any fine for the *Dhoby's itch*¹ of which we hear today !

The punishments provided for the washermen by the *Manusmṛiti* and the *Yājñavalkyasmṛiti* are not codified so carefully as those provided by that master legislator Kautilya in the following passage of the *Arthashastra* in Book IV, which deals with *Removal of Thorns* (कण्टकहोचम) Chapter I (pp. 228-229 of English Trans. by Shamasastri, 1929 :—

After providing rules against the offences committed by *Weavers* Kautilya observes :—

“*Washermen shall wash cloths either on wooden planks or on stones of smooth surface. Washing elsewhere shall not only be punished with a fine of 6 paṇas but also be subjected for the payment of a compensation equal to the damage.*

Washermen wearing clothes other than such as are stamped with the mark of a cudgel shall be fined three paṇas. For selling, mortgaging or letting out for hire the clothes of others, a fine of 12 paṇas shall be imposed.

In case of substitution of clothes they shall not only be punished with a fine equal to twice the value of the clothes but also be made to restore the true ones. For keeping for more than one, two, three or four nights clothes which are to be made as white as jasmine flower,² or which

1. Vide *Hobson-Jobson* (by Yule and Burnell, 1903, p. 312) *Dhoby's itch* is a trouble-some cutaneous disease supposed to be communicated by cloths from the wash and *Dhoby's earth* is a whitish grey sandy efflorescence, found in many places from which by boiling and the addition of quick lime an alkali of considerable strength is obtained.

2. To make the clothes “as white as jasmine flower” is well nigh impossible without the use of soap-nuts, alkaline earth, etc. referred to in the *Manusmṛiti* and the other *Smṛitis* as cleansing agents.

are to attain the *natural colour* of their threads on *washing on the surface of stones*, or which are to be made whiter merely by *removing their dirt by washing*, proportional fine shall be imposed. For keeping for more than 5 nights such clothes as are to be given *thin colouring*, for more than 6 nights such as are to be made *blue*, for more than 7 nights such as are to be made either as *white as flowers*, or as *beautiful and shiny as lac, saffron or blood*, and such clothes as require much skill and care in making *brilliant*, *wages shall be forfeited*.

Trustworthy persons shall be judges in *disputes regarding colour* and experts shall determine the necessary *wages*.

For washing the *best garments*, the *wages* shall be *one pāpa*, for those of middle quality, *half a pāpa*; for those of inferior quality $\frac{1}{2}$ of a *pāpa*.

For *rough washing* on big stones, the wages shall be $\frac{1}{3}$ of a *pāpa*.

In the first wash of *red coloured clothes* there is a loss of $\frac{1}{2}$ part (of the colour); in the second $\frac{1}{3}$ part. This explains subsequent losses.

The rules pertaining to *washermen* are also applicable to *weavers*.

The foregoing rules against the malpractices of washermen clearly prove that these "artists" have not much changed their ways in spite of the lapse of 2000 years since the time of the *Arthashastra* as every one of my readers can testify by comparing these old malpractices with those of modern washermen. Even today our clothes are entirely at the mercy of these artists, who feel themselves at liberty to give them on hire, or to subject them to such malpractices as damaging, discolouring, exchanging, mortgaging or using them personally.

The *Amarakola* (II, Chap. 10—*धुवर्ष*, verse 10) gives two synonyms for *washerman* in the following line:—

“*निर्गन्धः स्याद्गन्धः*”

It appears from the term *गन्ध*, which etymologically means "dye" that the *गन्ध* not only dyed clothes but washed them as well. At any rate the two professions of the dyer and the washerman were combined by some persons and hence the terms *निर्गन्ध* (washerman) and *गन्ध* (dyer) came to be used as synonyms perhaps long before the time of the *Amarakola* (between A.D. 500 and 800). The class of washerman flourished evidently in the towns with their aristocratic population as the villagers in ancient India washed their own clothes as they do today. Accordingly the *Jatakas* refer to "the *Rajakavithi*" the street of *washermen-dyers*¹ in a town. Evidently this reference shows the profes-

1. Vide p. 213 of *Pre-Buddhist India*, by R. V. Mehta, Bombay, 1939—Chap. on Organization and Production. Dr. Mehta quotes *Jataka* IV, p. 21 for the reference to *रजकवधि*, which he translates as "street of dyers."

sion of *Rajaka* in a thriving condition in an urban locality in the early centuries of the Christian era.

The following tabular statement shows at a glance the Chronology of the salient data collected in this paper :—

CHRONOLOGY.	REFERENCE
B.C. 285 ...	Theocritus, the poet of Syracuse is the first to mention the use of soap for washing. रिह (रिह) = रीसा (mentioned in इकराप्पयवत्त). मनुस्मृति mentions बरिह (= रीसा) for cleansing blankets. कर्त्तव्य of Kauṭilya provides detailed punishments for washermen for their misdeeds. The मनुस्मृति and वाग्भट्टस्मृति provide fines for washermen for their misdeeds.
2nd c. A.D. ...	<i>Dioscorides</i> mentions the use of soap wort or fuller's herb for washing cloths and dresses.
A.D. 79 ...	<i>Pliny</i> mentions fuller's herb under the name <i>Struthion</i> . <i>Pliny</i> mentions soap as the invention of Gauls. He also mentions hard and soft soaps.
A.D. 131-201 ...	<i>Galen</i> mentions soap for washing. He preferred German soap to Gallic soap.
3rd c. A.D. ...	<i>Serenus Sammonicus</i> , physician to Emperor Septimius Severus mentions soap as means of washing.
c. A.D. 100-500 ...	References to केनक (soap-like substance or shampooing material) mentioned for the use of a man of fashion by the <i>Kāmasūtra</i> . वाग्भट्टस्मृति prescribes बरिह (रीसा) for washing blankets (कुम्प).
Before A.D. 800 ...	पद्मचरित्निघण्टु mentions सलका also called बज्जुकेना.
A.D. 500-800 ...	Mention of बरिह and केनिक as names of soap-nut tree (रीसा) in the <i>Amarakota</i> .
c. A.D. 625 ...	Mention of सलका and बरिह in बरदागिखण्ड of Vāgbhaṭa I.
A.D. 700-900 ...	Mention of बरिह and सलका in बरदागिखण्ड of Vāgbhaṭa II.
A.D. 1060 ...	Recipe for a soap as depilatory given by Cakrapāṇi.
c. A.D. 1100 ...	पद्मन् explains बरिह as "बरीसा" (soap-nut).
A.D. 1159 ...	सर्वांगण्ड explains बरिह as "हरिह."
A.D. 1200-1275 ...	The lexicon <i>Medini</i> mentions सलका (रिहेकाई).

CHRONOLOGY

REFERENCES

- A.D. 1483-1721 ... References to *soap* terminology in *Shorter Oxford English Dictionary*.
- A.D. 1450 ... राजनिषण्डु of Narahari mentions सातका (सिफेकार्).
- A.D. 1469-1538 ... *Guru Ndnak* in his *Prayers* refers to सपूनी (soap).
- A.D. 1590 ... *Ain-l-Ahbari* mentions *Lonar* in Berar as possessing requisites for making *glass* and *soap*.
- A.D. 1644 ... *Bocarro* in his *Report* refers to *Sabão* (soap).
- A.D. 1599-1649 ... Marathi Poet *Muktetvara* refers to सापण in his songs.
- A.D. 1773 ... सापण prescribed against skin disease in a Poona document.
- A.D. 1788 ... "बिजापती साप" (English soap) sold in Poona market.
- A.D. 1811-1812 ... Francis Buchanan's detailed description of *Country-soap manufacture* in Bihar. *Patna soap* was used all over Bengal.
- A.D. 1887 ... References to *Country-soap manufacture* at different places in India recorded in *Imperial Gazetteer* which refers to *Soap-factories* also at some places.



1. THE ORIGIN AND ANTIQUITY OF THE
CASTE-NAME OF THE KARAHĀṬAKA
OR KARHĀḌĀ BRAHMIN*

[गुप्ते-गुणे परम्पराया इतिहास इ। 'कन्हाडे ब्राह्मणांच्या इतिहासाची साधने' या नामेत छापण आहे. या माळेसंबंधी जे काही लिहावयाचे होते ते या पुस्तकाच्या प्रारंभीच्या 'निवेदन'त विहिते आहे, व त्याप्रमाणे पुणे येथील मांभाकर ग्राम्यविद्यालयाचेमिदिनातील सुप्रसिद्ध संशोधक प्रा. प. कृ. गोरे यांचा " कन्हाडे ब्राह्मणज्ञातीचे पुरातनत्व " हा इंग्रजीतील निबंध येथे छापत आहे. केवळ कन्हाडे ब्राह्मणज्ञातीच्या बऱ्यासाच्या दृष्टीने हा निबंध महत्त्वाचा आहे असे नवून सर्वत्र ब्राह्मणज्ञातीच्या इतिहासाच्या दृष्टीने तो महत्त्वाचा आहे. कन्हाडे ब्राह्मणज्ञातीसंबंधी इ. स. १३० पासून ते आत्तापर्यन्त पर्यंतची सविस्तर व साधार माहिती या निबंधाने उपलब्ध झाली आहे. त्यावरून याचे महत्त्व न्यायत येईल.

या निबंधाच्या सुमारे पहिल्या दहा पानांत निरनिराळ्या जातीचा अभ्यास शास्त्रीय पद्धतीने छद्मदा ह्याना पाहिले हे दाखविले आहे. त्यांतच जॉन किप्लर याने इ. स. १८८० त लिहिलेल्या 'Indian Castes' (हिंदुधार्मिक जाती) पुस्तकातील कन्हाडे ब्राह्मणांच्यासंबंधीची माहिती जाती असून ती माहिती या निबंधाच्या दृष्टीने किताबत उत्पुष्क आहे हे दाखविले आहे. त्यानंतर कन्हाडे ब्राह्मणज्ञातीचे पुरातनत्व ठरविण्याच्या दृष्टीने कलंबांगणुष्याने निरनिराळे अरहाटक, अरहाट, अरहाडे, अरहाटक ब्राह्मण, कन्हाडे ब्राह्मण, इत्यादि शब्दांचे सुमारे पन्नास साठ उल्लेख सविस्तर बरोबर दिले आहेत, तसेच अरहाटक ब्राह्मण म्हणजेच कन्हाडे ब्राह्मण होत, हे नमूनाभिधान सांगतल्या 'कन्हाड' या शब्दाचा अन्वयातील गोंयाच्या नांवावरून आले आहे हेहि पण दाखविले आहे. कलंबांगणुष्याने निरनिराळे उल्लेख देताना कौकणस्थ, देवस्थ, देवस्थे, देवगणी, सारस्वत इत्यादि ब्राह्मणांच्यावरूनहि जुनो ऐतिहासिक माहिती दिलेली आहे. कौकणस्थसंबंधी जुन्यांत जुना उल्लेख सरदीस निबंधांत, देवस्थे ब्राह्मणांच्यासंबंधी काशीसंस्थ प्रमुख विद्वान् ब्राह्मणांकडून संमत झालेल्या इ. स. १५८३ मधील (इ. १५०५) ' सुक्तिमंडपनिर्णयपत्रांत ' आला आहे. त्यांत ' बसुडे प्रमुख ' कन्हाडे ब्राह्मणांचीहि ल ' संमति ' आली आहे. इ. स. १४४८ त लिहिलेल्या ' महिडावतीच्या बघरी ' मध्ये देवस्थाना जुन्यांत जुना उल्लेख आला आहे. कन्हाडे ब्राह्मणज्ञातीच्या मराठी बाब्यातील जुन्यांत जुना उल्लेख इ. स. च्या १३ व्या शतकातील महानुभावीय प्रभाषिकी ' लंडाचरित्र ' या ग्रंथांत आला आहे.

मावळकर-सरदेसाई परम्परांच्या इतिहासावरून व रामापूर येथील मागवताना इ. स. च्या बाराव्या शतकांत शिवाहार राविकडून फरोळी गोंयासंबंधी मिळालेल्या ताबड्यावरून शिवाहारांच्या अज्ञातासून पुढचे इ. स. च्या अकराव्या शतकापासून कन्हाडे ब्राह्मणांचे तळमोठ्यांत घालतच आणवे असे दिसते.

या ज्ञातीच्या ताबड्यातील जुन्यांत जुना उल्लेख सुवर्णवर्षदेव गोविंद व या वा राहुडूट रामाच्या इ. स. १३० मधील ताबड्यांत आला आहे. (तो येणेप्रमाणे— " अरहाटक प्रमुख मा (मा) छाननाय कनासिद्धाकिंक इत्यर्थे. ") त्या ताबड्यांत बंधूप्रणामिहित गोविंद चौथा याने जमिनी ब्राह्मणांतून घेतल्या असून शिवाय एक हजार ब्राह्मणांच्याकरिता, रोज बसवण नासविण्याकरिता म्हणून ' मनीसलन ' हे गांव देणगी म्हणून दिले आहे. अखेरचात जेवणाच्या हजार ब्राह्मणांत ३६० अरहाटक ब्राह्मण, ३०० अन्य ब्राह्मण व २४० अरहाटक प्रमुख जसे आहेत. यावरून अरहाटकांचे राहुड्यांच्या एखाद्यांत बरोच वजन होते असे दिसते.

* History of the Gunc Family (ed, V. T. Gunc)—Appendix.

इ. स. १५८१ 'सुफिलम्बननिर्म्बना' त कऱ्चे प्रमुखांचा काशीसोबांत उमेख आन्वाचें वापूरी लिहितेन आहे. शिवाय सदरील निबंधांत इ. स. १६०० ते १७०० च्या दरम्यान पुढील कऱ्चे पंथितवरांची माहिती आली आहे : नारायणभट आरवणे, रघुनाथ गणेरा नवहस्त ऊर्फ नवाच्ये, रघुनाथ म्हावरे पाटे, कोयमट पुणेहित. हे सर्व उमेख पंडित असून त्यापैकीं पुणकऱ्हांनी जांजे संस्कृत ग्रंथ लिहिते आहेत. इ. स. १७५० च्या सुमारास रायच अथवा खांबेकर म्हणून पुण्यस्तंभास एक पंथित होते. मोरोपंत पराबक्रांचें कवित सर्वप्रसिद्ध आहे. गेल्या शतकांत सुंबईचे प्रा. जांभेकर आदि शिबंद विद्यालं मंडळी होऊन गेली, त्यांचा नांदे सदरील निबंधांत 'सरस्वती-मंडल' या कै. गुंठीकरांच्या इ. स. १८८४ मधील पुस्तकांतिल उताऱ्यांत आलां आहे. त्यांत या ज्ञातींत होऊन गेलेल्या ऐतिहासिक व्यक्तींचीहि माहिती आली आहे. शिवाय दुसऱ्हा या ज्ञातींमधीं किर्तीतरी उपयुक्त माहिती आलेली आहे.

अशा प्रकारें राष्ट्रज्ञान्यापासून ते ज्ञानदातायापर्यंतचीं या ज्ञातींची गेल्या सुमारे १०० वर्षांचां तर्फितर माहिती या निबंधांत आली आहे व सुमारे ५०० वर्षांची या ज्ञातींतिल विद्वद्रांची परंपरा उपलब्ध ज्ञानी आहे. यावरून प्रा. गोस्वामी हा निबंध लिहित्यास किती परिश्रम करावें लागले असांत त्याची कल्पना आमच्या वाचकांना येईल.

—संपादक.]

In the remarks about the Karbhādā Brahmins in the Bombay Gazetteer¹ no attempt has been made to trace the origin and development of this sub-caste of the Mahārāṣṭra Brahmins on the strength of documentary or inscriptional evidence. John Wilson in his *Indian Caste*² devotes four pages to the Karbhādā Brahmins, but I fail to find in them any historical fact about the antiquity of this caste or the practices alleged to have been once current among them. I may note here a few points from Wilson's remarks :—

(1) The *Karbhādā*s or *Karbhādās* received their designation from the town of Karbhād near the junction of the rivers *Kṛṣṇā* and *Koyanā*, about 15 miles to the South of Satara.

(2) The *Sahyādrīkhaṇḍa*³ shows a spirit of violent hostility to them.

1. Vide Vol. IX, pt. i, 2, 497 note 8 (Karbhāda, a caste of Brahmins in Gujrat, modern immigrants); pp. 436, 438, 497—K, said to be shipwrecked strangers, made Brahmins by Parasurāma; p. xii (note 3), and pp. 497, 498—Stranger element shown in K; p. 498 and note 5 and 500—Gujar origin of Ratnagiri Karbhādās; Karbhādās in Ratnagiri Dist., X, 114; *Savannmādi* X, 411; in *Kolaba Dist.*, XI, 45; in *Khandesh*, XII, 52; in *Thana Dist.*, XIII, 79; in *Kanara Dist.*, XV, pt. i, 132, 133; in *Nasik Dist.*, XVI, 40; in *Ahmednagar Dist.*, XVII, 58, 59; in *Poona Dist.*, XVIII, pt. i, 171-172; in *Satara Dist.*, XIX, 53, 54; in *Sholapur Dist.*, XX, 32-33; in *Bijapur Dist.*, XXI, 90; in *Dharwar Dist.*, XXII, 95; in *Bijapur Dist.*, XXIII, 89; in *Kolhapur State*, XXV, 62.

2. Pub. by *Times of India*, Bombay, 1877, Vol. II, pp. 21-24.

3. The *Sahyādrī Khaṇḍa* contains some matter about the castes in the Mahārāṣṭra. It was used as authority in caste-disputes during the 17th and 18th centuries. No attempt has been made by any scholar to determine the chronology of this source and authority pertaining to the history of castes in the Mahārāṣṭra. No critical edition of this work worth the name has been attempted by any one by collecting all available MS material for this *Khaṇḍa* of the *Shandapūra*.

(3) They have 10 *gotras*:—(1) मारुहाय; (2) कौशिक; (3) बल; (4) कौण्डिन्य; (5) काश्यप; (6) बसिष्ठ; (7) जमदग्नि; (8) विश्वामित्र; (9) गौतम and (10) बभ्रु.

(4) In the *Brahmāṇḍapurāṇa*, (adh. xi) the Karhādā Brahmins are denounced. Wilson observes that this denunciation "is probably the production of some of the Deśastha Brahmanas, whose antipathy to the Karhādās is well known."¹

(5) Wilson states that the practice of human sacrifice alleged against the Karhādās in the *Sahyādri-Khaṇḍa* may have been a truthful² one but no instance of it has been brought to the notice of the British Government since the assumption of the Peshwah's territories in 1818. This practice was probably confined to the worshippers of Śakti (Mātṛkādevī) among the Karhādās but it has been totally abandoned and there is no reason to charge the Karhādās of the present generation with the guilt of its observance.

(6) The Karhādās appear in every way as respectable as their neighbours. The great Marathi poet *Moropant* was a Karhādā Brahmin. To this caste belonged "one of the most learned natives who has yet appeared in Western India, the late distinguished Bāḷa Gaṅgādhara Shastri Jāmbhakar, Professor in the Elphinstone Institution". What is generally said of the intelligence of the Konkanāsthas is applicable to the Karhādās, with whom they are generally on friendly terms.³

1. Vide p. 448 of *Indian Caste*, Vol. I, 1877.

2. Except the scandalizing gossip of the *Sahyādri Khaṇḍa* no evidence of a historical document has been recorded to prove that the custom of human sacrifice was current among the Karhādās at any time of their history.

3. The cultural history of Mahārāṣṭra has not been scientifically investigated though ample material for such an investigation now exists in our historical records and MSS Libraries. The Mahārāṣṭra Brahmins of all sub-castes including the Karhādās seem to have played a prominent role in this cultural history. During the course of my historical studies spread over the last 27 years I have written more than 250 research papers on the history of Indian Culture and Sanskrit authors which include papers on many Mahārāṣṭra authors. I note below my papers on some Karhādā authors:—

(1) *Some authors of the Arde family and their Chronology*—(Between A.D. 1600 and 1825)—*Journal of the Bombay University*, Vol. XII, Pt. II, (Sept 1943), pp. 63-69—नारायणमहाराज (A.D. 1600-1675) composed *श्रीमदामिनागर*; *रघुनाथ* (A.D. 1700-1775) wrote *रघुनाथचरित* (पूर्ववर्तिकथासार); *रघुनाथ* (A.D. 1750-1825) was a great logician. Aufrecht records about 74 M.S. of his works.

(2) *Rāghava Āpā Khāṇḍekar of Panyastamba—His Works and Descendants*—(From A.D. 1750 to 1942)—*Annals* (B. O. R. Institute, Poona) Vol. XXIV, pp. 27-44. Rāghava Kavi was a versatile poet. He has written works on *jyotiḥ*, *kāla*, poetry, etc. in Sanskrit. He has also composed some good religious poems in Marathi.

(3) *Raghunātha Ganṛa Navastha* (नववाचि)—Between A.D. 1640 and 1710—He was Upādhyāya of the Chāḷpa) Math of Saint Rāmadās and also a great friend of the Saint. Raghunātha was a pupil of जनार्दन and स्वतंत्राचार्य etc. Raghunātha was a great Sanskrit Pandit and composed *मोक्षकुण्डल*, *प्रायश्चित्तकुण्डल* etc. After Saint Rāmadās's death in A.D. 1682 he migrated to Tanjore and composed some Marathi

The remarks of Wilson regarding the Karhādās made about 70 years ago show rather his earnestness in recording available information than his deep knowledge and first-hand study of the different castes of India. For a scientific study of the Indian caste-system a historical study of the different castes is absolutely necessary and for such a historical study the antiquity of the several caste-names now current needs to be studied on the strength of documentary evidence. No scholar would be justified in resorting to any kind of "kite-flying" method of research unless all the available sources are exhausted; but the popular tendency is to record a series of surmises on a given problem, which are detrimental to the historical truth and its correct perspective. All caste-names presume the existence of caste-consciousness in an intensified form and the proper approach to the historical study of castes in India must be made through a study of the antiquity of the caste-names now current. The antiquity of a specific caste-name can be determined by noting actual usages of it in documents of known chronology and when this antiquity is once established beyond challenge we are in a position to presume that the caste-consciousness of a particular social group lies somewhere in the vicinity of the caste-name, the exact distance in time between the origin of this caste and its earliest discovered usage, being still a matter for further exploration and critical research.

To believe in the traditional gossip about the antiquity of a historical fact is one thing, while to prove such antiquity on the strength of

works under the patronage of Queen Dipābāi, the wife of Ekoji Bhosale, the brother of Shivaji the Great Raghunātha belonged to *Bilashi* in the Satara Dist. He was of *Vaidika* gotra. [Vide my papers on this author in *Jour. Bombay University*, Vol. X, Part 2 (Sept. 1941), pp. 113-140; *Annals* (B. O. R. I.), Vol. XXII, pp. 254-263 and *Journal of S. M. Library, Tanjore*, Vol. III, No. 1 (12 pp.)—A paper of a contemporary MS of the *मौलिकपुराण* belonging to रामजी नायक पुत्र (1650-1683 A.D.) has been submitted to the 12th Session of the All-India Ori. Conference, Benares (Dec. 1943)].

(4) *Raghunātha Mahādēva Ghāṭe of Hardi* near Raipur (A.D. 1650-1725). He educated his sons in the Shastri manner as proved by his own letter to his guru. The tradition of learning in the Ghāṭe family has been maintained since A.D. 1600. About 500 MSS belonging to this family are now deposited with the Sanskrit Pāṭhshālā, Raipur. Pt. Raghunātha Shastri Patanker brought to my notice all these MSS. Raghunātha Ghāṭe was a highly religious man. He composed some works on *dharmaśāstra* such as *श्रीनिवासीयिका*, *निषया(न्याय)* etc. [Vide my paper on Raghunātha in *Jour. of Tanjore, S. M. Library*, Vol. II, No. 3. (13 pp.)—and another paper on his family history to be published in the *Journal of the U. P. Historical Society*.] Raghunātha was of *कौटिलिक* गोत्र.

(5) *Kelavakhal Purohita* (between A.D. 1640 and 1695 or so). He belonged to Purye near Bhadkambla, my own native place in the Sangameswar Taluka of the Ratnagiri Dist. (Vide my paper on him in *Annals* B. O. R. Institute, Vol. XX, pp. 235-248). He was patronized by Chatrapatis, Shivaji, Sambhaji and Rajaram. My friend Mr. V. S. Bendre has published Kelava's (1) *श्रीनिवासीयिका* and (2) *दण्डनीति*. Kelava's descendants are still at Purye enjoying the *ināms* given by the Chatrapatis.

documentary evidence is another. Mere verbiage written in a journalistic style for popular consumption has no historical value. It neither enlightens the writer nor the readers for whom it is written. Without analysis there can be no synthesis and the greatest harm done to the advancement of knowledge can be safely attributed to the habit of gossiping, which though refreshing to the mind is positively detrimental to a serious pursuit of knowledge.

The emphasis laid by me on the necessity of studying the antiquity of caste-names is not a mere academic proposition for me. To illustrate the method to be adopted in proving such antiquity I contributed to the *Journal of the Bombay University* a paper on the "Antiquity of the caste-name *Seṅvi*."

In this brief paper I took a survey of the available material bearing on the antiquity of the caste-name *Seṅvi* and proved on inscriptional evidence that the term "*Seṅvai*" mentioned three or four times in the Pandharpur inscription illustrates the usages of the caste-name *Seṅvi* (= *Seṅvai*) in the 3rd quarter of the 13th century A.D. for the reason that the inscription in question is dated A.D. 1276.¹ The usages of the term "*सेगवे*" and "*सेगवी*" in the inscriptions of the 13th century have a special value for the students of the history of Indian caste because these usages definitely establish the antiquity of this caste for more than 700 years and it can be taken back by a few centuries earlier if not more.² It is, however, difficult to envisage conclusively the exact degree of this antiquity for want of documentary evidence of a contemporary character. My friend Rao Bahadur Talmaki, who has written a book on *Sārasvat Families* told me personally that, he had not discovered such early usages of the caste-name "*Seṅvi*" as established by me in the small paper referred to above.

Since the publication of the above paper I have contributed another paper of the above type to the *Rao Bahadur G. S. Sardesai Commemoration Volume* on the antiquity of the caste-name "*Gābit*."⁴ The present

1. Vol. VI, Part 6, pp. 152-155 (1937).

2. Vide p. 9 of *मराठी भाषेची वाड* by Y. R. Date in his "महाराष्ट्रभाषा-व्यास" (1936). In the Gomāntaka Copperplate of Saka 1221 (= A.D. 1299) "*सेगवी कुळ*" and "*साग सेगवी*" are mentioned.

3. According to Prof. G. M. Moraes the earliest reference to the caste-name *सेगवी* is in the Velipattana Plates of Raṅgarāja dated 24th December 1010 (*Indian Historical Quarterly*, IV, pp. 213 and 214, lines 44-45) which record a gift to a Saṅkamsiṅya, the son of "साङ्गण सेगवे जगमेव....." Prof. Moraes observes:—"The editor, however, lacking local knowledge has taken the term to mean साङ्गणसेनापति or general" (vide Prof. Moraes' paper on "*Notes of Pre-Kadamba History of Goa*" read at the History Congress, Hyderabad).

4. Vide pp. 213-222 of *Sardesai Comm. Volume*, 1938.

accounts of this caste-name given by the members of this caste of fishermen, living along the Konkan Coast state that the term "Gābit" is derived from *Grāb* or *Gurāb* (its present form). By this explanation they try to connect the *Gābits* with Shivāji's navy, which consisted of gun-boats called *Grāb* or *Gurāb* and the men who worked on these gun-boats came to be called *Grābīts* or *Gābīts*. I have proved in my paper on documentary evidence that the explanation of the caste-name *Gābit* as given by the members of this caste and incorporated in the *Jñānakōśa* and the *Sābdakōśa* and even adopted by Enthoven in his *Tribes and Castes of Bombay* is a pure myth. Shivāji the Great was a great hero. He had also a great navy and any association of any set of people with his great navy must make these people great but this patriotic derivation, for which I have every sympathy, has no foundation in fact as it is directly contradicted by a document. This document contains the usage of the term "Gābit" in 2/3 places and also mentions a coastal settlement of these *Gābits* near Deogad called *Gābit-mumrī*, a name still current as my friend the late lamented Rao Bahadur W. A. Bambardekar assured me personally. The date of the document² under reference is A.D. 1633, a year when Shivāji was in his infancy. Now to connect the antiquity of the word *Gābit* with Shivāji's navy when its usage is found in a duly attested document of A.D. 1633 would be sheer anachronism. Evidently the term *Gābit* had come into existence prior to A.D. 1633 and its genesis must be sought in earlier sources, whether Marathā or Portuguese, even if we accept the derivation of the term *Gābit* from *Grāb* (a gun-boat). Another way of studying the antiquity of a caste is through a study of the antiquity of a particular family, which is now known to belong to that caste. For instance, my friend

2. This is a sale deed of property in favour of राम ठाकूर (dated 28th February 1633) of Jāmsānde near Deogad. *Rām Thākūr* is the earliest of my ancestors who may be assigned to the period A.D. 1590 to 1660. I have proved in a separate note that the old name of the present *Gods* family was *Thākūr* and it was current upto A.D. 1800 or so. The present *Thākūrs* of Jāmsānde and *Gods* are identical as they are *Karhāḍī Brahmins* of *Kātyōpa Gotra*. The *Gods Bahār* records हृदयपति near जामसांडे as the native place of नारायण ठाकूर who led 10000 troops against Tulaji Angria in A.D. 1748 (Jan. to March) and demolished his fort मुद्रागड. The *Salahi Daftar* with the B. I. S. Mandal, Poona, contains 20 sale-deeds of properties purchased by *Thākūrs* of Jāmsānde between A.D. 1633 and 1685. Members of the *Thākūr* family mentioned in these sale-deeds are:— राम ठाकूर (A.D. 1633 and 1640); विठ्ठल ठाकूर (A.D. 1640, 1645, 1648, 1669, 1670, 1676, 1679, 1685); जाल or जलोबा ठाकूर (A.D. 1649, 1650, 1651, 1654, 1656 (he is called सौदागर), 1657, 1659, 1660); अनंत (अनन्त) ठाकूर (A.D. 1657); नारायण ठाकूर मोकादम (A.D. 1659 and 1660) purchased a property from रोगमठ गोपालमठ रामदिवा (रान्दि). Of these persons the line of राम ठाकूर is clear from the documents. It is as follows:—

राम ठाकूर → son जाल or जलोबा ठाकूर → son विठ्ठल or चिठोबा ठाकूर
(c. A.D. 1590-1660) (c. A.D. 1620-1660) (c. A.D. 1630-1700)

अनन्त ठाकूर and नारायण ठाकूर possibly belonged to a cousin line.

Mr. G. S. Sardesai of Kolhapur has tried to establish that the history of the Sardesai family belonging to the Karhādā Brahmin caste could be traced back to about A.D. 1150, when the Śīlāhāra King Vijayārka was ruling over Kolhapur.¹ Even if the continuity of this family from A.D. 1150 to 1943 and all its varied branches is proved the history of the caste-name "Karhādā" as applied to this family still remains problematical.

In the grant² given by Raja Bimba to Puruṣottama Pant Kāvāle in A.D. 1299 we don't find the caste-name "देवास्थ" applied to him. He was the Rājaguru of Raja Bimba. His descendants are still living and they belong to the *Devastha Śukla-yajurvediya Brāhmaṇa* caste. The grant mentions the surname "Kāvāle" now current among his descendants. This document of A.D. 1299 though it may establish the antiquity of the surname "Kāvāle" cannot establish the antiquity of the caste-name "Devastha"³ unless we actually get the usage of this term in a definitely dated document.

In the *History of the Gokhale-Rāste Family*⁴ prepared by Mr. Apte a letter dated *Śaka 1110* (= A.D. 1488) we find mentioned the name "केसवट विजु बीसवट गोखले." We know that the Gokhale family belongs to the Chitpāvan caste of the Mahārāṣṭra Brahmins. It is impossible to conclude, however, that the term "Chitpāvan" was actually in use in A.D. 1488 unless such usage of the term "Chitpāvan" is actually found in a dated document.

It will thus be seen that though the above usages of the sur-names "Kāvāle" and "Gokhale" may be found in documents of A.D. 1299 and 1488 respectively, no conclusion can be arrived at on the basis of these usages as regards the antiquity of the caste-names "Devastha" and "Chitpāvan."

Coming now to the question of the antiquity of the caste-name "Karhādā" it may be emphasized here that an attempt to prove the antiquity of this caste through the antiquity of surnames of families now belonging to this caste can never be successful because one and the

1. Vide p. 14 of सरदेसाई चरण्याबा इतिहास (पूर्वार्ध भाग ११२), 1926.

2. Vide Appendix A (facing p. 88) to देवास्थशुक्लयजुर्वेदीय ब्राह्मण इति वर्य माहितो by N. V. Vaidya Purandare, Bombay, 1884.

3. Pt. S. Chittrav Shastri states that the expression "देवास्थ कुलवेदी" has been recorded for the first time by Kṛṣṇa Jyotisi, author of the कृष्णजीवनी who was a protige of Shivaji the Great (A.D. 1653)—Vide p. 311 of the Marathi Magazine *Samaraha* (October 1943). I shall refer later in this paper to the expression "देवास्त ब्राह्मणसमुदाय" found in the portion of महिषासुरीची वधर composed in A.D. 1448 according to historian Rajwade.

4. Vide p. 227 of गोखले व गोखले-रास्ते चरण्याबा इतिहास by Govind Vinayak Apte, Poona, 1922.

accounts of this caste-name given by the members of this caste of fishermen, living along the Konkan Coast state that the term "Gābit" is derived from *Grāb* or *Gurāb* (its present form). By this explanation they try to connect the *Gābits* with Shivāji's navy, which consisted of gun-boats called *Grāb* or *Gurāb* and the men who worked on these gun-boats came to be called *Grābits* or *Gābits*. I have proved in my paper on documentary evidence that the explanation of the caste-name *Gābit* as given by the members of this caste and incorporated in the *Jñānakośa* and the *Śabdakośa* and even adopted by Enthoven in his *Tribes and Castes of Bombay* is a pure myth. Shivāji the Great was a great hero. He had also a great navy and any association of any set of people with his great navy must make these people great but this patriotic derivation, for which I have every sympathy, has no foundation in fact as it is directly contradicted by a document. This document contains the usage of the term "Gābit" in 2/3 places and also mentions a coastal settlement of these *Gābits* near Deogad called *Gābit-mumri*, a name still current as my friend the late lamented Rao Bahadur W. A. Bambardekar assured me personally. The date of the document² under reference is A.D. 1633, a year when Shivāji was in his infancy. Now to connect the antiquity of the word *Gābit* with Shivāji's navy when its usage is found in a duly attested document of A.D. 1633 would be sheer anachronism. Evidently the term *Gābit* had come into existence prior to A.D. 1633 and its genesis must be sought in earlier sources, whether Maratha or Portuguese, even if we accept the derivation of the term *Gābit* from *Grāb* (a gun-boat). Another way of studying the antiquity of a caste is through a study of the antiquity of a particular family, which is now known to belong to that caste. For instance, my friend

2. This is a sale deed of property in favour of राम ठाकूर (dated 29th February 1633) of Jāmsānde near Deogad. Rām Thākūr is the earliest of my ancestors who may be assigned to the period A.D. 1590 to 1660. I have proved in a separate note that the old name of the present *Gode* family was *Thākūr* and it was current upto A.D. 1800 or so. The present *Thākūrs* of Jāmsānde and *Godes* are identical as they are Karhāḍī Brahmins of *Kalyāṇa Gotra*. The *Gode Bahār* records हुदपति near जामसांडे as the native place of नारी रायाजी ठाकूर who led 10000 troops against Tulaji Angria in A.D. 1748 (Jan. to March) and demolished his fort मुदायद. The *Salsbi Daftar* with the B. I. S. Mandal, Poona, contains 20 sale-deeds of properties purchased by *Thākūrs* of Jāmsānde between A.D. 1633 and 1685. Members of the *Thākūr* family mentioned in these sale-deeds are:— राम ठाकूर (A.D. 1633 and 1640); विठ्ठल ठाकूर (A.D. 1640, 1645, 1668, 1669, 1670, 1676, 1679, 1685); जान or जानोबा ठाकूर (A.D. 1640, 1650, 1651, 1654, 1656 (he is called सौदागर), 1657, 1659, 1660); कल्प (अनन्त) ठाकूर (A.D. 1657); नारायण ठाकूर मोकादम (A.D. 1659 and 1660) purchased a property from रोषभट गोपालभट रामडिवा (रानडे). Of these persons the line of राम ठाकूर is clear from the documents. It is as follows:—

राम ठाकूर → son जान or जानोबा ठाकूर → son विठ्ठल or विठोबा ठाकूर
(c. A.D. 1590-1660) (c. A.D. 1620-1660) (c. A.D. 1630-1700)

अनन्त ठाकूर and नारायण ठाकूर possibly belonged to a cousin line.

Mr. G. S. Sardesai of Kolhapur has tried to establish that the history of the Sardesai family belonging to the Karhādā Brahmin caste could be traced back to about A.D. 1150, when the Silāhāra King Vijayārka was ruling over Kolhapur.¹ Even if the continuity of this family from A.D. 1150 to 1943 and all its varied branches is proved the history of the caste-name "Karhādā" as applied to this family still remains problematical.

In the grant² given by Raja Bimba to Puruṣottama Pant Kāvāle in A.D. 1299 we don't find the caste-name "देसाच" applied to him. He was the Rājaguru of Raja Bimba. His descendants are still living and they belong to the *Deṣastha Śukla-yajurvediya Brāhmaṇa* caste. The grant mentions the surname "Kāvāle" now current among his descendants. This document of A.D. 1299 though it may establish the antiquity of the surname "Kāvāle" cannot establish the antiquity of the caste-name "Deṣastha"³ unless we actually get the usage of this term in a definitely dated document.

In the *History of the Gokhale-Rāste Family*⁴ prepared by Mr. Apte a letter dated *Saka 1110* (= A.D. 1488) we find mentioned the name "केसवत विनु गोलभट गोखले." We know that the Gokhale family belongs to the Chitpāvan caste of the Mahārāṣṭra Brahmins. It is impossible to conclude, however, that the term "Chitpāvan" was actually in use in A.D. 1488 unless such usage of the term "Chitpāvan" is actually found in a dated document.

It will thus be seen that though the above usages of the sur-names "Kāvāle" and "Gokhale" may be found in documents of A.D. 1299 and 1488 respectively, no conclusion can be arrived at on the basis of these usages as regards the antiquity of the caste-names "Deṣastha" and "Chitpāvan."

Coming now to the question of the antiquity of the caste-name "Karhādā" it may be emphasized here that an attempt to prove the antiquity of this caste through the antiquity of surnames of families now belonging to this caste can never be successful because one and the

1. Vide p. 14 of सरदेसाई घराण्याचा इतिहास (पूर्वांश भाग ११२), 1926.

2. Vide Appendix A (facing p. 88) to देसाचशुक्लवज्रवेदीय ब्राह्मण ऋषींची सरा माहिती by N. V. Vaidya Purandare, Bombay, 1884.

3. Pt. S. Chitram Shastri states that the expression "देसाच कुलवेदी" has been recorded for the first time by Kṛṣṇa Jyotisi, author of the कर्णकौस्तुभ who was a protégé of Shivaji the Great (A.D. 1653)—Vide p. 311 of the Marathi Magazine *Samartha* (October 1943). I shall refer later in this paper to the expression "देसाच ब्राह्मणसमुदाय" found in the portion of महिकावतीची वखर compiled in A.D. 1448 according to historian Rājwade.

4. Vide p. 227 of गोखले व गोखले-रास्ते घराण्याचा इतिहास by Govind Vinayak Apte, Poona, 1922.

same surname may be found among the *Devastha*, *Citpavan* and *Karhādī* Brahmins of to-day e.g. the surname *Patvardhan* is found among the *Citpavans* and *Karhādīs* as well. Then again we find this sur-name associated with different *gotras*. This makes confusion worse confounded. The method of studying the antiquity of castes on the basis of a study of sur-names requires in the first instance the compilation of an exhaustive *Chronological dictionary of all sur-names*, where the record of every usage of a sur-name in any document, whatsoever, of definite or approximate chronology is systematically recorded. When all available records are utilized in the preparation of such a dictionary we shall be in a position to have at a glance the earliest known usage of a particular sur-name, proving the antiquity of and also the subsequent history of the family bearing that surname. With a view to have an idea as to how such a dictionary can be compiled I have myself collected and arranged chronologically some usages of sur-names from varied records of known dates. The value of such a dictionary for a study of family history is inestimable because it is bound to furnish clues for a search of family documents, which will be useful for reconstructing the history of a particular family of any caste, whatsoever.

To reconstruct the history of known and historically celebrated families, with sufficient records in their possession is comparatively an easy task when you arrange these records in a chronological order and publish them with an exhaustive *names-and-places* Index; but to reconstruct the history of unknown or extinct families on the strength of casual references to them in manuscripts and other records is a very hard task and it is exactly for this task that a chronological dictionary of sur-names should be compiled. I shall now illustrate my argument by a few examples. The sur-name "*adhya*" or "*ādhye*" is a *Karhādī* Brahmin sur-name. My friend Mr. S. B. Adhye, now a pleader residing in Poona, cannot produce any documents to prove the antiquity of his sur-name. My dictionary will give him some help in this respect. I have recorded two names of the members of this family viz. (1) A.D. 1669—*श्रीविष्ट जप्ता* (RK-20-284) and *श्रीविष्ट जप्ता* (A.D. 1669—RK¹-20-283). In the same documents where these names are found we have the name of a person having the sur-name *विष्टा* (A.D. 1669—RK-20-283) which is possibly identical with the surname *विष्टे* now current among the *Karhādī* Brahmins. "*सदकर*" is a *Karhādī* surname and Mr. Trimbak Dāmodar Tātkar of this family is now a resident of the Savantwadi State. My dictionary shows two references to "*सदकर*", one of A.D. 1697

1. RK = रावबाहे (साफळे-संघ).

2. My friend Rao Behadur Sardar M. V. Kīsh, M.A., who is interested in the antiquity of his surname may note this usage of "*विष्टा*" (A.D. 1669). The singular usages of surnames like *परविष्टा* (for *परविष्टे*); *वेना* (for *वेने*); *सिमया* (for *सिमये*); *गोत* (for *गोते*) are now current in Konkan. They are also found in many old documents.

(Ping. 50) and the other of A.D. 1742 (Ping. Ap. 41).¹ These are instances of Karbādā surnames incidentally gathered and recorded in my tentative chronological dictionary of surnames. I shall now record here the usage of a *Cisrāvan* surname as an example to illustrate my point. On a document dated 5th April 1676 I find the signature of one "केसरीय गवरे जोस काचगन कचिवा".² In the Ratnagiri District near Jayagad we have a village called "गरे काचगन" the old name of which was "साडे काचगन" as I am informed by Mr. Parshuram Mahadeva Gadre of this place, now in Poona. I am of opinion that the expression "काचगन कचिवा" in the above document has something to do with "साडे काचगन," the old name of the place as reported to me by the above member of this family.

The foregoing instances are sufficient to illustrate the value and importance of a *Dictionary of Surnames*³ as a necessary preliminary step to a closer study of the problems pertaining to the origins of different castes in India. Anthropology or sociology must take count of History and hence an organized effort to investigate the historical side of every problem is absolutely necessary as a valuable corrective to fanciful results, sometimes arrived at by workers ignorant of the historical aspects of the problems studied by them.

Leaving specialists to study the surnames,⁴ their origin and development or extinction perhaps with the extinction of families

1. Ping = Pingulkar's History of the Savantwadi State (in Marathi).

2. Vide p. 421-2 of सरदेसाई प. इतिहास - उपराध संव २.

3. A *Dictionary of Surnames* based on contemporary documents will be able to fix the antiquity of each surname to the extent of the documentary evidence. If each historian of a particular family records the usages of surnames found in the sources published by him by preparing a glossary of them it will be very helpful to the research students. When the castes of surnames mentioned in a dated document are known their usages are very helpful for the histories of the families bearing these surnames. For instance, the earliest document recorded in the *Athalye Family History* by V. V. Athalye (1939) is a letter of Shivaji dated 6th March 1676 (vide p. 18). In this letter the surname "आटोलीवे" is recorded for the following persons:— (1) त्रिमलमट son of बाबदमट, (2) अनादमट son of पुदपोलमट, (3) हरिमट son of गोविंदमट and (4) बरमट son of विश्वनाथमट. In the निवादापत्र issued by बान्होजिरात्रि प्रमाणबलीकर dated 9th October 1600 A.D. I find a reference to a member of this family as follows:—

"केचमट आठवे उपाध्ये व पयोपिचरणी तवे देवके"

The *Karbādā* surnames in this document of A.D. 1600 are:— (1) पाध्ये उपायाम गोकुलनीकर, (2) पुरोहित or राजपुरोहित, (3) सधे, (4) गदे, (5) वरदेसाई, (6) सरदेसकुलकर्णी. Vide p. 23 of V. S. Berdre's *एकनौति के शेष पण्डित*, B. I. S. Mandal, Poona, 1943.)

4. भारत इतिहास-संकटक संमेलनहस्त (७. ६.)—Saka 1837 (A.D. 1915) p. 26.—Vide Mr. G. K. Chandorkar's article on the copperplate grants of the Calukya king's general धीरमदेवराय. These grants contain surnames such as मयुंदेसाई, पेशास, पशुधेन, भाजु, उपायाम, पाठक and चक्रवे. Each surname has been recorded as having different *gotras*, some of which are not now current for that surname. Mr. Chandorkar finds that *gotras* recorded in the month of *Kārtika* of *Saka 1181* for particular surnames are not found in the month of *Pauṣa* of the same year and for those very surnames.

bearing such surnames I proceed to record in this paper some dated usages of the caste-name "Karhādā" with which I am mainly concerned here :—

(1) During the time of the Peshwas the caste-names *Koṅkaṇastha* or *Citpāvan*, *Karhāde*, *Deṣastha* etc. were quite common and these castes were clearly marked out. In the list¹ of Peshwa's clerks of A. D. 1774-75 we find in one list 54 *Koṅkaṇasthas*, 15 *Karhādes*, 3 *Deṣasthas* while in another we have 28 *Koṅkaṇasthas*, 5 *Deṣasthas*, 7 *Karhādes*, and *Marāṭhā*.

(2) In a letter² dated 11th May 1760 the Peshwa Sadāshiv Chimnaji asks Govind Ballājī (Kher) who was himself a Karhādā Brahmin to intervene and settle up a dispute between the *Citpāvan* and *Karhāda* Brahmins. The exact nature of this dispute is not known to us but such disputes were quite common during the Peshwa's regime as the caste-differences were quite marked out during this period.

(3) In a letter³ from Būlakṛṣṇa Dikṣita dated 7th May 1751 we find names of persons with surnames as follows :—

गोविंदभट्ट बह्ला, ब्राम्हायभट्ट माइगिळ, हम्मराव धनुषांरी, गणेश रक्षित ओक, बीचभट्ट केळकर, सदाशिवभट्ट देगळे, नारी महादेव मुळे. The writer also mentions "बाच सात कराडे".

(4) A letter⁴ dated 13th February 1751 addressed to Vāsudeva Dikṣita, possibly from Benares, mentions परभूट, कन्हादे⁵ etc. It also refers to surnames like परबर्धन, बसे etc. One "वासुदेवभट्ट मुने कन्हादे" is mentioned in this letter as recipient of a sum of Rs. 40.

(5) In a letter⁶ dated 26th December 1735, Nārāyaṇa Dikṣita Patan-
kar the *guru* of Peshwa Bājirao I complains that the Peshwa's mother Rūdhābai made unfair distribution of *dakṣiṇā* to Brahmins of Benares of different castes. In this letter I find the usages of such expressions as "निसपावनांस" and "कराडी बापको" which are expressive of caste.

(6) In a letter⁷ from Chimaji Appa to Brahmendra Swami of Dhavadshi we find the following statement :—

1. Vide नेमणूक जावता (इतिहाससंग्रह)—Nov. to Jan. 1916. Vol. VII, Parts 4 and 6, pp. 296, 298.

2. *Rajwade Sources of Maratha History, Khopda XV*, (750-1761)—
"वितपावन व कच्छे यांचा कर्म्या" —"कच्छरणे की कच्छ न बाते"

Rajwade remarks on p. 273 (foot-note) :—

"कर्म्याचे स्वका काय होतें तें कच्छें तर बरेच अभ्यस्तान्य होतें"

3. Vide *Rajwade, Khopda 3*, p. 356, letter No. 383.

4. *Ibid*, p. 346, letter No. 376.

5. *Peshwa Daftar Selection 30*, letter 147.

6. *Brahmendra Covitra* by Parasnis, letter No. 145.

"शिवाची देवदस्याची माणसें जतन आदरेत."

Perhaps the देवस्त्रे Brahmin caste is referred to here. This letter is of course of a date prior to 17th December 1740, the date of Chimaji Appa's death.¹

(7) Viśvanātha Gopal Joshi of Sangameshwar (Ratnagiri Dist.) who composed his *dharmalāstra* work *Vratarāja*² in January 1736 mentions in it that he belonged to *Cittapāvan* caste ("विष्णुपावनजातीय").

(8) In the *Koṅkaṇa-Ākhyāna*³ composed about A.D. 1750 there are references to the *Karhādā* and *Cittapāvan* Brahmins as will be seen from the following extract :—

We are informed by the author of this *ākhyāna* that a Gauḍa Brahmin from Gomāntaka (Goa) composed this *ākhyāna* about 175 years ago (i.e. about A.D. 1750). The author further informs us that both the *Karhādā* Brahmins and the *Gauḍa* Brahmins of Kuḍāla (Savantwadi State) are followers of one Veda viz. the *Ṛgveda*. Besides this similarity they have some surnames with corresponding *gotras* in common with the *Karhādā* Brahmins.⁴

1. Vide p. 3 of *Marathi Riyāsat* (Medhyavihāṅga 2), 1921.

2. Vide my article on the *Vratarāja* in the *Mīmāṃsā Prākāśh*, I, 44-46 (1936)—The author of the "गुप्तयजुर्वेदीय माहात्म्याची माहिती" states that the *Cittapāvan* and *Karhādā* Brahmins migrated to गणपती from *Koṅkaṇ* during the *Peśhwa* period (p. 4). The *Śeṭṭh* Brahmins migrated to उत्तर कोंकण from *Goa* about A.D. 1533 when the Portuguese captured *Bassein* (p. 18). *Chimaji Appa* conquered *Bassein* in A.D. 1739 and the whole of the उत्तर कोंकण came into the possession of the *Peśhwas*. At this time the *Cittapāvan* and *Karhādā* Brahmins migrated from दक्षिण कोंकण to उत्तर कोंकण (p. 19).

3. Vide p. 9 of the *Pratīvaṇā* to the *History of the Kuḍāladēla* (1915).

(P. 47) — केरळास मुस्लिमास तथा गोरापृथ्वसिनः ।

कोंकणास्य कन्दाडास्य वरालटास्य बर्भराः ॥

केरळ माहण केरळ देशी । मुस्लिमास तुळव देशी ॥

गोरापृथ्वणे गोर्णवासी । इवीय हे गोरपृी ॥ ५० ॥

या त्रिबर्ग उत्तरयागासी । स्थापिते रामे दोघासी ॥

कन्दाड चितपावन बर्भरदेशी । क्षेत्रासीं ये देऊनी ॥ ५१ ॥

गोभंत देश मध्य कोंकण । पोड्या योजने पिस्तीर्ण ॥

तेये स्वकीय सारस्वत माहण । गोरवोनी स्थापिते । ५२ ॥

4. *Ibid*, p. 62—These surnames are as follows :—

<i>Surname</i>	<i>Gotra</i>	<i>Surname</i>	<i>Gotra</i>
(1) डाहूर	कात्रि	(4) गोसावी	भारद्वाज
(2) डाहूर	गार्ग्य	(5) राजवाडेकर	काश्यप
(3) बोरे	भारद्वाज	(6) महाजम	जामदग्न्य

(9) In the *Bakhar* of *Nyāyāśāstri Paṇḍitrao* composed in A.D. 1848 we find a passage² about the dispute³ between *Citpāvan* and *Devārūkhā* Brahmins.

(10) In a *Sammatipatra*⁴ (consent letter) of A.D. 1746 from the Brahmins of Nasik and Trimbak to one Tukambhat Dharmabhat Jāvle, Agnihotri, Palshikar we find the following endorsement of a *Citpāvan* Brahmin :—

“ज्योतिषिदुपनामक विलपावन प्राची नारायणस्य संमतमेतत्”

This Narayan Joshi appears to have been quite conscious of his caste “*Citpāvan*” in A.D. 1746. In another *Sammatipatra* dated 7th February 1746 [vide ऐतिहासिक संकलनाधिकारसंग्रह २ (MQ XIII) No. 63] in connection with the use of विष्टपशु at a sacrifice we find the following endorsements :—

“संमतेष्वर्थः कन्दोडि नागेशः”, “मन्वा कन्दोडि”, “हरिमत कन्दोडि”,

Possibly the epithets ‘कन्दोडि’, ‘कन्दोडि’ and ‘कन्दोडि’ signify the caste-name *Karhādā*.

(11) In a letter⁵ dated 28th November 1733 from Mahādāji Ambāji to Panta Pradhan we find mention of “म्याती विलपावन प्रभू सगवाइक” of रामसेन.

(12) In a letter⁶ of Chimāji Āppā to “Baba Svāmi” written sometime before A.D. 1740 mention is made of ‘विलपावन’, ‘विलपावन’, ‘कन्दोडि’, ‘कन्दोडि’ and ‘वैश्वदेव’ Brahmins.

1. Vide p. 12 of *Bhāratavartā* (Khaṇḍe 1).

2. Ibid This passage reads as follows :—

“विलपावन व वैश्वदेव यांचा कार विवासावन वाद वास्तव होता. सर्व मुद्रतमट पंडितस्य (made पंडितार्थ about A. D. 1707) याणी मोठ्मोठया सेत्री सभा करून मोठ्मोठया प्रयाचे आधार फेडून वैश्वदेव यांचे पंकांत जेव्हाच हारून नाहो. वांजकचे मुष्टिकेवा फल दोष आहे याचमाले उराय पसंत केले, त्यांत ज्या प्रयाची आधार लाविले त्यांचा नांव, व विद्वान गृहस्थांच्या सभा जाहत्या आहेत.”

3. An exhaustive account of the history of this dispute appears in *Chitalkhatta Prakaraṇa* by R. S. Pimpurkar, Bombay, 1926. The appendices to this *Prakaraṇa* are historically very important as they contained dated decisions of Benares Pandits in the dispute in question. These decisions and other documents are :—

(1) मुष्टिकेवर्षालोक नियम (Saka 1505)—A.D. 1583.

(2) Do (Saka 1579)—A.D. 1657.

(3) श्रीराम काशी येथील ब्राह्मणमोजन (Saka 1605)—A.D. 1683.

(4) मुष्टिके येथील नियमपत्र (Saka 1645)—A.D. 1723.

(5) वैश्वदेव येथील पत्र (Saka 1696)—A.D. 1774.

(6) Fragment of an undated old document found in the records of Mr. Madhavrao Pimpurkar of Umbargaon.

In my papers on some Sanskrit authors of Benares I have made use of the first three documents in the above list and proved their historical character on the strength of contemporary evidence.

4. मुष्टिक व. ब्राह्मणांची माहिती (pp. 70-72).

5. Vide p. 76 of पुराणे दर्शक भा. १ (1929), Letter No. 106.

6. Ibid p. 98, Letter No. 146.

(13) An edition of *Bṛhatpāraśarasmṛiti* was published about 1873. In this edition some verses containing a eulogy of *Cittapāvan* Brahmins were interpolated presumably by some Konkṣasthas. These verses have no place in the original text of this *Smṛiti* (published at Calcutta). This forgery or interpolation was exposed by the late Viṣṇu Paraśurāma Śāstri Paṇḍit in the issue of the newspaper *Indu Prakash* for 16th June 1873.¹

(14) In a *Sammatipatra*² from Benares Pandits dated *Samvat* 1844 or *Saka* 1710 (= A.D. 1788) "कर्हाटक" and other Brahmins of Bombay are referred to in the following line :—

"मुम्बापुरस्य विद्वांसू देशस्य-वित्तपावन-कर्हाटक-गुर्जर-मन्त्रि-बाधपानप्रति-कीर्त्तनीतो महोपास्यदासंमहादीनां नतयः"

This endorsement clearly shows the existence at Bombay of these Brahmin communities in A.D. 1788.

(15) In a document³ dated *Saka* 1640 (= A.D. 1718) a "विष्णव कर्हाडा ब्राह्मण" of the Adilshahi regime is referred to as follows :—

"त्वानंतरं दुर्गे ज्योतिषी म्णोनं कर्हाडा ब्राह्मण विज्यापुराह्वनं सरज्योतिषपणं वाप्यास फोड्के दिसे अग्नास चास्त असताच बाळा" — "एषा उचरी महाप्रदीपामध्ये विष्णव कर्हाडा ब्राह्मणं वायुदेवमतं वाचे परी मतबंधं जाह्ला तेये ज्योतिषान्ती कटक केडी"

Another document⁴ of *Saka* 1640 (A.D. 1718) refers to a dispute between विद्वल ऋ(म)धत सरज्योतिषी and a *Karhāḍā* by name मास्करमत समे as follows :—

"मुं कर्हाडा गुसा कर्हाड देना घाटावर गुमें वास्तव्य. कोड्गप्रति घाटाखाति ज्योतिषीच मिरासदार ऐसें चौघानें म्णतांच उगाच राहिका"

1. Vide p. 62 of मुक्ते य. श. माहिती—The interpolated verses are sandwiched between two lines of a verse (42) of नृहरिवारासरस्मृति in the following manner —

"इत्येतद्वधानमार्गान्नु वदन्ति ऋयो द्विधाः ।

interpolation begins —

कीड्गास्त्रितपूर्वार्ते वित्तपाव (न?) संज्ञकाः ॥ ४२ ॥

ब्राह्मणेषु च सर्वेषु य (त?) स्ते उत्तमा मताः ।

एतेषां बंशजाः सर्वे विज्ञेया ब्राह्मणाः खलु ॥ ४३ ॥

माप्यन्दिनाद्य देशस्या गौडप्रविशगुर्जरीः ।

कर्णाटा तैलप्रदयोपि वित्तपूर्णस्य बंशजाः ॥ ४४ ॥

अतवित्तस्य पूर्णं यो निग्नास्तस्य सद्यो भवेत् ।

here ends the interpolation.

केविद्वन्द्याद्भुगुः (?) रूपं ब्राह्मविदो विधेः ॥ ४५ ॥ "

The above interpolation trying to establish the superiority of the *Cittapāvan* Brahmins makes amusing reading !

2. Vide p. 26 Appendices to सरस्वती मंडल by H. B. Gunjikar, Bombay, 1884.

3. Vide इतिहाससंग्रह (गोमार्तकाव्य) इतिहासाची साधने से. ५०).

4. Ibid (pp. 56, 57) — से. ५२.

The above passage of A.D. 1718 stating that the *Karhādās* belong to *Karhādātia*¹ (कुं कराहा तुला कराह देश) clearly indicates the association of the *Karhādā* Brahmins with the province of *Karhāda* (Satara District). Another passage in the above document of A.D. 1718 indicates the territorial limits within which the *Karhādā* community was then residing. It reads as follows:—

“सुध्यायं कराचं यास कुडाळ फोंडें व जांबोली पंचगहाळ शिबेश्वर मांकोले पावन जे कराहे म्हुनुन जात बाहे त्यास गिरासहृदि देकापूर वा देपात नाहीं. पर्वति देवन वा देषामध्ये पावन आमचा वृत्तिचंताचा उजेर करून आम्हास बहिर्घाटून आपण आमचा वृत्ति भोगाव्या हें सोझितात”

Judging from the above passage a majority of the *Karhādā* Brahmins was residing in the Sawantwadi State at places mentioned in the document viz. कुडाळ, फोंडें, जांबोली, पंचगहाळ, शिबेश्वर and मांकोले. Perhaps the records of the Sawantwadi State may throw more light on this question.

From the Peshwa period of the Maratha history we now enter the Shivaji period. It is difficult to collect references to the *Karhādā* and other caste-names in the records of this period. However, I shall note here a few of them to illustrate my point.

(16) In a letter² dated *Saka 1598* (A.D. 1676) we are told that Brahmins belonging to the देसास, कदावे, पित्तपावन and पये castes were living in the territory round about मर्दानगड and भिवगड. The writer directs मोरेश्वर संदितराज in charge of the forts *Mardangad* and *Bhivgad* to arrange for an examination of these Brahmins as directed by Chatrapati (Shivaji) Svāmi and select some Brahmins for charitable endowment. The passage containing this direction reads as follows:—

“वर्तमान व मार्वादेश यांत मर्दानगड व मांत भिवगड या प्रति मोरेश्वर संदितराज मजफ्कार शक ३ नक संवत्तर, लिहिला मजिप्राय येसेजे:—इमये देषामध्ये माझण आहेत.

1. Vide p. 35 of “*The Konkan*” by Nairne—Mr. Nairne observes:—“Rajapur Taluka is the native place of *Karhādā* Brahmins”. Sri Kṛṣṇa Śāstri Taljekar in his letter (published in the *Indian Antiquary*, Jan. 1876, Vol. V) refers to the *Sakṛdri Khaṇḍa* of the *Śhonda Parḍya* in this connection. According to the account of this *Khaṇḍa*—

काराहू is the home of the *Karhādā* Brahmins. It is 40 *Koṭa* between वेदावती (वाणी river) on the South and कोयना on the North. This is the country known by the name कर्हाड at the junction of कोयना with कर्हाड.

That the caste-name “कर्हाड” is derived from the place name कर्हाड is proved also by the analogy of the other caste-names देसास्य and कौडणस्य, which are derived from देस or महाराष्ट्र and कौडण respectively.

2. Vide गोमतिदास्या इ. साधने, ले. ३२ dated *Saka 1598* (*Māgha vadya 13*).

देशस्त, कर्नाडे, वितपावन व जोतिषी व पणे देवोपाप्य भादेठ. वा सक्तांची परीक्षा केव्हु उत्तम माक्षण दानायोग्य म्हणउनु राजध्री छत्रपति स्वामीचे आज्ञापनाचे घर्मादये शान्भूक कव्हु देऊन प्रसिद्धा केळति etc. "

This passage is also important as it contains the caste-names देशस्त, कर्नाडे, वितपावन and पणे current in A.D. 1676. It also indicates the geography of these castes, by which I mean the territory in which the Brahmins of these four castes were residing in A.D. 1676.

(17) विशनाथ महादेव रानडे² a court-poet of Raja Ramsing I of Jaipur, who flourished at Benares between A.D. 1650 and 1700 and who seems to have been a disciple of Kamalākara bhāṭṭa, the author of the निनेपत्त्रि ("कमलाकरांतिसार") refers to himself as "वितपावनजातीय" in his drama called the युगावधिपिका represented by a MS in the India Office Library, which is dated A.D. 1707.

(18) In the poems³ pertaining to the Maratha King Sambhaji published by me the author refers to one "वितपावन" "शिवयोगी" of सुंगारपुर near Sangameshwar (Ratnagiri Dist.) who went to Rādhā in Bengal (between A.D. 1660 and 1690). He later attained Tāntric Siddhi, returned to सुंगारपुर and founded a मठी or hermitage at this place.

(19) नारायण लक्ष्मीधर आरडे, a Karhādā Brahmin, the author of गृहसिंहास, लक्ष्मीधरिका, आरुद्राय, etc. was resident of Benares, highly respected by the Brahmin community there. His consent in connection with caste-disputes of the Deccani Brahmins is vouched by the following endorsements on documents of A.D. 1631 and 1657:—

(i) *Sammātipatra*⁴ (regarding Sārasvata Brahmins) dated *Samvat* 1687 (= A.D. 1631)— "आर्दीपनामक नारायणभट्टानां संमतम्"

(ii) *Muktimaṇḍapa Nirṇayapatra*⁵ (regarding Devarukhe Brahmins) dated Saka 1579 (= A.D. 1657)—

1. The 2nd *Prākaraṇa* of मंदिकवतीची चरम (ed. by Historian Rajawade) (pp. 3-62) was composed by its author देशपावये in Saka 1370 (= A.D. 1408). This *Prākaraṇa* of 1448 A.D. contains the following references to the Mahārāṣṭra Brahmins:—

P. 34—(1) "यजुर्वेदि माध्यानिदिने भेद वाजिन शिखेपे"

(2) "देशस्त माक्षण सुमुदाये"

P. 61— "विठोबा नायक छत्र यजुसार्था देशस्त."

It would appear that the term "देशस्त माक्षण" was current in A.D. 1448 if this date of the *Prākaraṇa* under reference is correct.

2. Vide my paper on this author in *Journal B. B. R. A. Society*, N. S. Vol. 17, 1941, p. 49.

3. Vide *Annals* (B. O. R. Institute), Vol. XIX, (1938), pp. 49-60—"शिवयोगी नाम वियद्विद्वान्निपावनः."

4. Vide p. 24 of Appendices to सरस्वती-मंडल by R. B. Gunjiker, Bombay, 1884.

5. Vide p. 78 of चितलेमठ प्रकरण by R. S. Pimpotkar, Bombay, 1926.

"संमत नारायणभट्ट आरडे इत्युपनामः"

It appears from the above dated endorsements of A.D. 1631 and 1657 that *भारवे* flourished at Benares between A.D. 1600 and 1670 or so. One of the Baroda MSS of his *पृथ्वीसागर* was copied in A.D. 1690. His father *कृष्णदीप* may be safely assigned to the period A.D. 1560-1620. He appears to have been a contemporary of Bhaṭṭoji Dikṣit (c. A.D. 1560-1620).

(20) The *Muktimaṅḍapa Nirṇayapatra*¹ of Śaka 1505 (A.D. 1583) (about the Devarukhe Brahmins) is endorsed by the leaders of the different communities of Brahmins as follows :—

“ तत्र संमतिः । भारवे गणेश प्रीतित प्रमुक्त विप्लोक्तये
 बसाले कृष्णमह प्रमुक्त कन्हाडे
 शेष कृष्णमह प्रीतित प्रमुक्त महाराष्ट्र
 गोरीमह प्रमुक्त गुर्जर
 विद्यागिषास महाचार्य प्रमुक्त गौड
 रघुपति उपाध्याय प्रमुक्त तैलमुक्त ”

It is clear from the above endorsement of A.D. 1583 of कृष्णमह बसाले that he was the leader (प्रमुक्त) of कन्हाडे Brahmins at Benares say between A.D. 1550 and 1600. The presence of the Karhādā Brahmin settlement at Benares is not only proved by the above endorsement but also by the history of the भारवे authors proved by me in my paper on these authors already referred to by me. It appears that Benares attracted many scholars from different parts of India from very early times and perhaps we may be able to trace some Karhādā Brahmin authors among these scholars even before A.D. 1500. Owing to the absence of the use of surnames in the works of earlier authors it is difficult to say what caste of Brahmins they belonged to and how they migrated to Benares and settled there.

(21) We have seen already that a document of A.D. 1718 contains the statement “ तु करवाडा वृक्षा करवाड देश. ” This statement records a belief about 250 years ago at the beginning of the Peshwa period that the *Karhādā* Brahmins belonged to *Karhād*. My friend Mr. Y. R. Gupte in his very informative and critical monograph on कन्हाड² states that this place is referred to in ancient inscriptions and works as करवाड, करवाडक, करवाडकक, करवाड, etc. He also quotes a passage from the

1. Vide p. 77 of चित्तलेमह मद्रकण (1926) — Appendix 1, dated A.D. 1583. I note here some usages in this document of caste-names and surnames :—

Caste-names :— (1) देशर्षि ब्राह्मण (= देशर्षे); (2) विप्लोक्तये (= विद्याधन); (3) कन्हाडे; (4) महाराष्ट्र (= देशरथ ?); (5) गुर्जर; (6) गौड; (7) तैलमुक्त.

Surnames :— (1) वाडेकर; (2) मवलसले; (3) तरे; (4) खालगीकर; (5) आरेकर; (6) कोसरेकर; (7) अमरकर; (8) भारवे (विप्लोक्तये); (9) पुराणिक; (10) चित्तले; (11) बसाले (कन्हाडे); (12) शेष (महाराष्ट्र); (13) शरे; (14) सापरकर; (15) अग्निचोरी.

2. Vide p. 3 of कन्हाड by Y. R. Gupte, B.A., M.A., Ph.D., (2nd edn.), 1929, (B. I. S. Mandal, Poona).

Mahābhārata according to which *Sahadeva* conquered करहाटक.¹ He states that in a Rāṣṭrakūṭa copperplate grant² of A.D. 753 the form करहाटक has been used. In another grant of the Rāṣṭrakūṭas we have also the form करहह which is mentioned as the place of residence of a Brahmin called ब्यासपट. This grant is dated 23rd April 810. Mr. Gupte thinks that from this time the term "क-हाडे ब्राह्मण" = "करहह ब्राह्मण" may have come into existence.³ If this statement is corroborated by further evidence it will prove that the term "क-हाडे ब्राह्मण" is about 1135 years old. But as Mr. Gupte does not produce any evidence on the point, the 1135 years-antiquity⁴ for the caste-name "क-हाडा" remains questionable. I shall, however, record here a usage of the term "क-हाडे ब्राह्मण" in a Marathi work of the 13th century but before doing so let us see if the names करहाटक or कराहाटक are equated with the caste-name "क-हाडा."

(22) In a Sanskrit letter⁵ of the Śāṅkarācārya of Śrīngeri dated *Saka 1608 (Māgha Suddha 15) = A.D. 1685*, which refers to an assembly of Brahmins we find a mention of the महाराष्ट्र Brahmins and of the कराहाटक Brahmins, as also the पच Brahmins as follows :—

1. Ibid, p. 25—सभापर्व अ. ३२ (महर्षेय-दक्षिणदिग्भिन्नम्)

"नारी संवदती च पाण्ड्यं करहाटकम् ।

दूतैरेव वशे चके करं वेदानदायन् ॥ ७२ ॥"

2. Ibid, p. 27—Śārngad (Kolhapur) Grant of Dantidurga II of the Rāṣṭrakūṭa family.

3. Ibid — "या वेळेपासून क-हाडास राहाणा-या प्राण्यास करहह ब्राह्मण किंवा क-हाडे ब्राह्मण म्हणण्याचा परिघाठ पडला असेल."

4. As the antiquity of the place-name "Karhāḍa" is linked up with that of the caste-name "Karhāḍī" I note here some facts about the former which recently came to my notice :—

(1) Mr. Y. R. Gupte has quoted references to Karhāḍa in inscriptions (between A.C. 200 and A.D. 100). He also states that some references to Karhāḍ are found in other inscriptions which according to him can be dated between A.D. 250 and 300.

(2) My friend Dr. V. S. Agrawala recently published a translation (*Journal of U. P. Hist. Society*, XV, Pt. 2, pp. 24-52) of Prof. S. Levi's article (*Journal Asiatique*, 1915) on the text of *Mahāmdyūri*, a Buddhist Charm for protection against serpents. The antiquity of this text is clear from its Chinese translations dated A.D. 317-22, 402-112, 516, 705, 746-771. In line 44 of this text करहटिक is referred to as follows :—

"नदिदक्ष विता नन्दी वीरस करहाटके"

Levi identifies करहटिक of this text with modern Karhāḍ. He states that करहटिक is referred to in the सभापर्व (31, 71) between बनवासी and पाण्ड्य and सोमदेव refers to करहाटक in his यगदिनलक्ष्मणुः—"इत्यस्मिन् सन्तु विन्ध्यादिगणैस्त्वा दिशि विहसन्सैवाथर्धो-विष्टः करहाटो नाम जनपदा."

5. Vide इतिहाससंग्रह (गो. ६. सापने-ले. ६) pages 9-10.

"काञ्चोपनामक विचनार्थमह तथा वाङ्चोपनामक दुरुपोत्तमचन्द्रमुखात् कराहाटक-ब्राह्मणानाम्निच"

As कान्हे is a *Karhādā* surname and as विचपायमह कान्हे is mentioned as a करहाटक ब्राह्मण in the above extract the equation "करहाटक ब्राह्मण" = "कन्हाडा ब्राह्मण" is proved by this document of A.D. 1685. This letter refers to the पंच Brahmins as follows :—

" तोटेकरोपिनायक पृथ ब्राह्मणानानीय "

and again refers to the *Karāhāḍaka* Brahmins :—

" करहाटककादीनां बस्मिन्देशे कृपादिकं किमपि बाधितव्यं नास्ति "

(23) In a document¹ dated April-May 1630 A.D. the caste-names देहास्य, विचपायन, कर्नाटक, गुर्जर have been recorded as follows :—

" मुंबापुरस्य देहास्य विचपायन कर्नाटक गुर्जर प्रभृतिक बाधवान् प्रति "

The communities bearing these caste-names were residing in Bombay in A.D. 1630. The signatories to the above document bear the following surnames :—

मह, कर्नाटिकारी, शेष, यश्री, पुण्यस्तंभ, मैत्र्य, देव, तार, दशपुत्र, वीरगिक, ज्योति-
शिव, कळ, कपायित, बागिदोपि.

This letter is addressed to the Brahmins of Bombay but I don't find in it the caste-name कन्हाडे or करहाटक. Mr. R. B. Gunjiker in his book on the Brahmin castes of Mahārāṣṭra called the सरस्वतीवंशक (Bombay, 1884) devotes pp. 161-175 (Chap. 5) to the कन्हाडे ब्राह्मण. About the *Karhādā* settlement in Bombay he observes :—

"Perhaps the *Karhādā* Brahmins may have migrated to Bombay before the *Citpāvan* Brahmins. However they have come to Bombay in large numbers during the last 50 years (i.e. c. A.D. 1830 onwards)."

Students interested in the history of the *Karhādā* settlement in Bombay should pursue the question further.

(24) There is a reference to the करहाटक Brahmins in a MS acquired by Sir R. G. Bhandarkar in 1883-84 and noticed by him in his *Report*.² This MS consists of a curious work called the बरिवाहकवर्णित represented to be the *Uttara* or the 3rd *Kāṇḍa* of a work entitled प्रह्वानकुमुदवर्णिका. According to Dr. Bhandarkar this work does not seem to be very old. बरिवाहक was the name of an *avatāra* of *Vijñu* different from *Rāma* or *Kṛṣṇa*. He belonged to the family of गौड सरस्वत Brahmins. बरिवाहक held a सत्र or sacrificial session for 12 years (folio 85). Many people gathered for this *Satra*. Their names are also recorded in the work (folio 85 ff). These names appear to be modern. They are चवनिचरवर्णनी,

1. Vide pp. 2-3 of *B. J. S. Mandal Troidsiha* (March 1935)—Article on सरस्वतीवंश ब्राह्मण by D. V. Apte. The date of the letter is "शालिवाहन शुके १५५२ ममोद्वारे वैशाखमास."

2. See MS No. 467 of 1883-84 in the Govt. MSS Library at the B. O. R. Institute Poona, folio 255, vide pp. 45 ff. of *Report on Search of Sanskrit MSS*, 1883-84.

शिवाचरिते, पूर्णानंदरच्यते.¹ All these *yatis* belonged to the *Gauḍa-sārasvata* caste of Brahmins. There were *yatis* of इषिष्ठ caste also. The *Ācāryas*² of the *Gauḍa* caste present at the *Sātra* are :— (1) महेश्वराचार्य, (2) शान्वाचार्य, (3) रामकृष्णचार्य, (4) केसावाचार्य, etc.

Seven करहाटक Brahmins of the names नादक, फानस, बाकर, etc. had arrived to attend the *Sātra* but they were not admitted. Then follows an abusive account of the *Karahāḍakas*. The writer a *Gauḍa Sārasvata* pours vile abuse on rival sects and castes like the follower of *Madhva*. Dr. Bhandarkar observes :— "The real author of the work must have been a man of the *Gauḍa-Sārasvata* caste living among Karhādā Brahmins between whom and his caste there was not, as there is not at present, a good understanding. चारिनाम must have been some local deity."

Dr. Bhandarkar has already emphasized the *modern* character of the चारिनामचरित, though he does not attempt to indicate any definite time limit for it. In my opinion the work is *later than* A.D. 1631, in which year मथानंदरच्यते and पूर्णानंदरच्यते (same as their name-sakes mentioned in this work) have signed a *Sammatipatra* about the *Sārasvata Brahmins*. The *Karhādā* Brahmins are mentioned in this work as "करहाटा द्विजाः" (folio 90 of the MS). The surnames फानस (= फलसे) and बाकर (= बाके) are Karhādā surnames at present.

From the foregoing evidence of documents we get the following chronology for the caste-names कन्हाडे, चित्तपावन (चिपोलणे), देवास and देवास्य :—

- (1) A.D. 1583—"चिपोलणे" (used with reference to a Benares settlement of these Brahmins).
A.D. 1630—"चित्तपावन (मुम्बापुरसे—Bombay Citpāvan settlement).
- (2) A.D. 1583—"कन्हाडे" (Benares settlement of *Karhādā* Brahmins).
- (3) A.D. 1448—"देवास" and "देवास्य माह्वण समुदाय" mentioned in the महिष्कवलीची बखर.

Leaving aside the antiquity of "देवास" and "चित्तपावन" caste-names I resume my discussion regarding the caste-name "कन्हाडे."

(25) Recently I have had occasion to study some texts of the *Marathī* literature in Marathī published at Nagpur and elsewhere.

1. In a *Sammatipatra* from the Benares Brahmins regarding the *Sārasvata* Brahmins, dated *Sambvat* 1687 (= A.D. 1631) we find the following endorsements (vide pp. 23-24 of Gunjikar's *Sarasvati Mandala*, Appendix 2) :—

"मथानंदरच्यतेसंमतम्"; "काशीपुरीवासिपूर्णानंदरच्यतेसंमतम्."

I don't find शिवाचरिते in this *संमतपत्र* of A.D. 1631 buthe may be taken to be a contemporary of मथानंदरच्यते and पूर्णानंदरच्यते. As these *yatis* were living in A.D. 1631 and as they are mentioned in चारिनामचरिते we may conclude that the account of the *सत्र* given in this work is *later than* A.D. 1631.

2. These *Ācāryas* should be identified as it is possible to suppose that they were historical persons, contemporary with मथानंद and पूर्णानंद of A.D. 1631.

Mr. Rajwade¹ assigns this literature to a period of 100 or 150 years before A.D. 1100. Messrs H. N. Nene and N. B. Bhavalkar assign the *Mahānubhāva* works published by them to the time of the Yādava kings of Devagiri or Daulatabad i.e. the 13th century A.D. I am concerned in this article with the *Mahānubhāva* work called the *लीलाचरित्र*. The work contains a record of episodes or anecdotes pertaining to the life of *कृष्णर* the founder of the *Mahānubhāva* sect. The work is not far removed from the time of the Yādavas of Devagiri who flourished in the 13th century. The editor of the work points out in it a reference² to the following lines which describe the *Śrāddha* of king Mahādeva of Devagiri:—

कृष्णरीयस्य रायाये आय... इत्यतः कृष्णरि गेहेः महादेवरायाये आय होम
होतेः यतः इत्यतः मुख्य वीहरीया केहेः तिस तिस आय् दान्नाति आक्रिया ॥ १५ ॥”

King Mahādeva flourished between A.D. 1260-71 and as the Yādava Kingdom was finally destroyed by the Mahommedans in A.D. 1318 it may be possible to conclude that the *याज्ञ* under reference was performed between A.D. 1271 and 1318 or so and that a reference to it has been recorded within living memory of the person recording it. These considerations coupled with the old Marathi language found in the *लीलाचरित्र* give it an antiquity of about 550 or 600 years. In this very *लीलाचरित्र* we find a reference³ to the *कर्हाडा ब्राह्मण* of *फलेटण* as follows:—

“श्री परेसाधनमः ॥ ० ॥ फलेटाणी कर्हाडे या ब्राह्मणाचां घरां अवतारु स्वकीरिका”

The above reference to a *Karhādā* Brahmin of *Phaltan* (*Satara* Dist.) occurring in a work of the 13th century is very important as it takes us over a period of 250 years from the Benares Brahmins of A.D. 1583 belonging to *Karhādā* caste, and their leader “बसले हृष्णभट्ट प्रमुख कर्हाडे”. In fact this reference is the earliest reference to the *Karhādā* Brahmins yet found by me in Marathi records or literature.

In the *Encyclopaedia of Religion and Ethics* by Hastings a reference is made to an article of Sir R. G. Bhandarkar published in the *Times of India* of 1902, in which he stated that *कृष्णर* the founder of the *Mahānubhāva* sect was a *Karhādā* Brahmin. I am not aware on what evidence the above statement was made by Sir R. G. Bhandarkar. The lines quoted above from the *Līlācāritra* very possibly explain the hypothesis, if such is warranted by evidence, that Cakradhara was associated with some *Karhādā Brahmin* of *Phaltan* during some part of his life. At any rate the above passage definitely refers to a *कर्हाडा ब्राह्मण* having his residence at *फलेटण* (= *फलेटण*). The Marathi expression “*कर्हाडेवा ब्राह्मणाचा*” distinctly refers to the existence of a group of Brahmins

1. Vide p. 396 of *Ātīthīk Praveśan* (B. I. S. Mandal, Poona, 1928).
2. Vide p. 90 of *लीलाचरित्र*, पूर्वापि खंड २.
3. Ibid, भाग १ ला-एकदिक—5aks 1858 (1936).

known by the name "कन्दाहे माझण" which is now current. As कन्दाहे is not very far removed from करुदन on the map the statement of the *Līlācaritra* appears to me to have a definite reference to the caste-name "कन्दाहे माझण" made about 650 years ago.

(26) I have recorded in this article evidence to prove that the expression "करहाटक माझण" is an equivalent of "कन्दाहा माझण" of today. This equation is proved by the letter of Śrī Śaṅkarācārya of A.D. 1685. I shall now give the evidence of an inscription¹ of the 10th century A.D. of the Rāṣṭrakūṭa king Suvarṇavarṣadeva (Govinda IV), in which the "करहाटक माझण" are mentioned. On the occasion of the eclipse of the moon the king made grants of land etc. and also ordered the donation of a village called "पयली दान" (on the western boundary of मालवेष्ट, the Rāṣṭrakūṭa capital). The object of the grant was to establish a सन्न or charitable feeding house where 1000 Brahmins of different denominations were to be fed from the proceeds of the village. The number of each class of Brahmins to be fed is specified as follows:—

360 — *Karnāṭaka* Brahmins.

300 — Brahmins of the *Kaṇva-Sākhā*.

240² — करहाटक माझण ("apparently those now known as Karbhādā Brahmins in Mahārāṣṭra" observes Rao Br. Dikshit—p. 104 of *Epi. Ind.*).

72 — Brahmins of *Catūcarapa*.

28 — *Sahasranāmānūya* Brahmins (common to the thousand).

Total 1000

The difference in time between this Rāṣṭrakūṭa Grant of A.D. 930 (referring to करहाटक माझण) and the earlier grant of the Rāṣṭrakūṭa King Dantidurga II dated 23rd April 810 (mentioning the name "करहाड" for कन्दाहे³) is only 120 years. The करहाटक Brahmins appear to have been in

1. Vide p. 107 of *Epigraphia India*. Part IV (Vol. XXIII) October 1935—Rao Bahadur K. N. Dikshit: "Three Copper-plate Inscriptions from Gaouri"—Line 11 of *A Fragmentary Grant of Rāṣṭrakūṭa Suvarṇavarṣa* (Govinda IV)—*Saka 851 = Sunday, 17th January 930* (according to Rao Bahadur Dikshit).

2. Line 11 of the Inscription—

"करहाटक प्रमुस मा (मा)झणानां कारवारिहादधिकं सतहचं"

3. I note here a few usages of the place-name कन्दाहे from Marathi documents of the 16th century as found on pp. 13, 14, 15 of the तृतीय संमेलन-पुस्तक of the B. I. S. Mandal, Poona, Saka 1837 (1915):—

"कन्दाहे" — A.D. 1507—*Letter No. 1 of Saka 1429* reproduced by V.K. Rajwade—
"कुलवणी कनये कन्दाहे"

"करह" — A.D. 1542—*Letter No. 2 of Saka 1464* —

"काण्ठोवा नरसोबा सेगवी.....
.....कतये करह सही"

the good grace of the Rāstrakūṭa King Govinda IV as they have been well provided for in his Grant of A.D. 930 i.e. in the ratio of 240 to 1000. We may compare this ratio with the ratio of the provision of the Karhādā Brahmins by the Peshwa in A.D. 1774-75 in his services. This ratio stands as (1) 15 *Karhādās* in a total of 72 Brahmins in one place, while elsewhere it is (2) 7 *Karhādās* in a total of 41 Brahmins.

(27) Mr. R. B. Gunjiker in his *Sarasvati Maṇḍala*¹ refers to a Sanskrit text called the *सप्तप्रबन्धस्तविका* by one माधव, who is said to have hailed from the Rajapur Province. In the *maṅgalācaraṇa* the author states that this work was composed in *Saka 1612* (A.D. 1690). He gives abusive accounts of the genes of the *विस्तपावन*, *करहाट* and other Brahmins. He gives fanciful derivations of caste-names as follows :—

(1) " *विस्तपुत्रिः कृता तेन (परशुरामेन) तस्माच् चिस्तपावनः* "

(2) " *चिस्तपावनशतिसो मेद्वैच वृतीयकः ।
" किलवैतलु विद्वेयः सोपि मिथः प्रकीर्तितः ॥ १८ ॥ "*

(3) Mādhavagives a rational derivation of the *करहाटक* caste-name from its association with *करहाट* :—

" *करहाटमिषे क्षेमे कृष्णातीरे गता यतः ।
विद्या ज्ञातिभेषु वै करहाटामिधानतः ॥ ७ ॥ "*
" *करहाटे तु सक्षेमे वासागु करहाटकाः ।
एवं वै द्विविधा शोकाः पद्याल्पाः करहाटकाः ॥ ११ ॥ "*

Mādhava states that the *करहाटक* Brahmins attained *पदकर्माधिकार* in *Saka 915* (A.D. 993). Gunjiker expresses his inability to understand the exact significance of this statement. If Mādhava's statement has any historical value it may be connected with the *Karhādās* of the Rāstrakūṭa court, where they had some influence as proved by the Rāstrakūṭa Grant of A.D. 930. The verse containing the chronogram for *Saka 915* reads as follows :—

" *करहृ* " — A.D. 1557 — *Letter No. 3 of Saka 1479* :—
— " *शोकदमनि पाा करहृ* "
— " *कान्दोमी यादव देसाई पाा करहृ* "
— Seal containing " *पाा करहृ* . "

1, Vide pp. 150-157 of *संस्कृतमिहम* (Bombay, 1884)—The colophons of the portions quoted by Mr. Gunjiker from the *सप्तप्रबन्धस्तविका* are as follows :—

- (1) 19 verses ending with
इति श्रीसप्तप्रबन्धस्तविकायां चिस्तपावनकिञ्चन सप्तशतशतपतिप्रश्नोत्तरम् ;"
- (2) 15 verses ending with
इति श्रीमाधवस्तु सप्तप्रबन्धस्तविकायां जातिविशेषे करहाटपद्योत्सति प्रश्नः उत्तरम् ;"
- (3) 18 verses ending with
" इति कृत्यां करहाटशतिसु वैश्वस्तु सप्तपाण्यप्रश्नोत्तरम् ;"

एवं बुनं वृत्तमिदं शास्त्रिणां ह्यन्यथा ।

करहार्हाटाभामविष्णुपदकर्मस्वाधिकारिनः ॥ १० ॥ —ग्रन्थः सप्तमः ॥

If the date Saka 915 (A.D. 993) in Mādhava's statement of A.D. 1690 has any historical basis it shows that the antiquity of the *Karahāḍḍakas* upto the 10th century A.D. was a recognized fact in the 17th century. I have tried to establish in this article such antiquity on the strength of inscriptional and literary evidence of a contemporary character.

(28) Mr. V. V. Athalye in his *History of the Athalye's Family* has reproduced a copperplate grant of A.D. 1191 given by king Bhoja of the Śilāhāra line to Govindabhaṭṭa *Gurjara* alias *Paṭṭavardhana*. According to this grant the grantee "गोविन्दहृद पटवर्धन" describes as "काश्यपा-वत्साराजैश्वर्येति त्रिमयरोदेस वैश्रवणोत्तोरपञ्च गुर्जर ससुपाभिधान" received the *dharmā-dhikāra* rights as also some *inām* land in the village described as "राजापुरोपसन्धि कुंतापुरग्रामे" i.e. modern Kōntāpur in the Rājāpur Taluka of the Ratnagiri District. This grant shows the patronage given by the Śilāhāra king Bhojadeva to the Karhāḍḍā grantee गोविन्दहृद पटवर्धन alias गुर्जर. A copy of this grant was made by the editor's uncle from the original in the possession of Mahāmahopādhyāya Gopal Pādhye Gurjar. This grant also indicates the migration from *Karahāḍḍaka* of the Karhāḍḍā grantee and his settlement in Kōnkan in the 12th century A.D. under the patronage of the Śilāhāras.

According to Mr. V. V. Athalye² the Athalye³ family also migrated from the village आठोळी in the पाटण Taluka near Karhāḍ.

In the Kolhapur Town Hall Inscriptions⁴ of Bhoja II of *Saka 1112, 1113, 1114 = A.D. 1190, 1191, 1192* respectively we have a record describing a grant made for the purpose of feeding सह्यासी Brahmins. The trustees for the grant are four Brahmins: two सह्यासी Brahmins and two करहार्हाट Brahmins. Dr. A. S. Altekar⁵ observes that the expression करहार्हाट ब्राह्मण "would probably show that the term *Karhāḍḍe Brāhmaṇas* of the modern times originally denoted Brāhmaṇas from *Karhāḍ*."

1. आठोळी चराम्याना इतिहास, प्रथमसंख, Poona, (B. I. S. Mandal, No. 36) 1939, pp. 9-11.

2. *Ibid* p. 292.

3. The Athalyes are Karhāḍḍā Brahmins of काश्यपगोत्र आसलायनसूत्र. A *Sanad* dated 1st July 1695 from Rājārām Chhatrapati describes the grantee of this *Sanad* as follows:— "वेदमूर्ति त्रिमलभटाचे पुत्र महादेवभट आठोळे काश्यपगोत्र आसलायनेन सूत्र वास्तव्य कथने वैश्वेते" (*vide* p. 31 of आठोळे च. इतिहास).

4. *Vide Epi. Indica*, Vol. III, p. 215.

5. *Vide* p. 429 of *Indian Culture*, Vol. II, No. 3 (Jan. 1936)—Dealing with "Religious condition" under the Śilāhāras of Western India Dr. Altekar states:— "सह्यासी Brāhmaṇas, now more popularly known as सन्धीस in Kolhapur-Satara territory, are referred to in our records. Now they are regarded as slightly inferior in status to ordinary Brāhmaṇas and several stories are current to account for the lower status that is given to them. In our period (the Śilāhāra period) no such ideas prevailed in society."

I believe this remark of Dr. Altekar has been amply corroborated by the volume of evidence gathered and recorded in this article.

(29) I have already referred in this article to the account of the *Karhādā* Brahmins given by Mr. R. B. Gunjekar in his pioneer work *Sarasvatī-maṇḍala* (Bombay, 1884), Chap. V. This account was published 7 years after Wilson's account of the *Karhādās* in his *Indian Caste*. I note here a few facts from Mr. Gunjekar's Chapter on the *Karhādā* Brahmins (pp. 161-175) :—

(1) Perhaps the *Karhādā* Brahmins migrated to Bombay earlier than the *Chitpāvan* Brahmins. They migrated in large numbers about A.D. 1830 onwards. The कान्हे and माहबोलकर families were the first to arrive in Bombay.

(2) The town of कन्हाड including the adjoining territory was the native habitat of the *Karhādās*. From thence they migrated to रायपूर province 300/400 years ago.¹

(3) माधव in his सतप्रभन्कल्पलता states that नदीपुर in Konkan was the native place of the *Karhādās* :—

“ क्षेत्रे परशुरामाख्ये क्षेत्रे नदीपुरामिधं
माह्वयाः सन्ति तादृशे श्रीतस्मात्प्रक्रियापरः ॥ १ ॥ ”

From नदीपुर they migrated to कराट्ट :—

“ कराट्टामिधे क्षेत्रे कुष्णातीरे गता यतः ।
मिथा क्वातिर्भवतु वै कराट्टामिधानतः ॥ २ ॥ ”

Mr. Gunjekar expresses his inability to identify नदीपुर in the above extract. At present the *Karhādās* are spread over different places such as Ratnagiri, Rajapur, Malvan, Savantwadi, Goa, Shahpur, Belgaum, Khanapur, Ajra, Kolhapur, as also Satara, Wai, Karhad, Mahuli, Poona, Sholapur, Nagpur, Baroda, Indore, Hyderabad, Jhansi, Gwalior, Benares, etc.

(4) Originally the *Karhādā* Brahmins were महाराष्ट्र or देवास्य Brahmins.

(5) According to माधव (सतप्रभन्कल्पलता) the *Karhādās* obtained पद्मनाभिकार in Śaka 915 (= A.D. 993). Mr. Gunjekar is unable to explain this statement.

(6) The *Karhādās* are both स्मार्त and वैष्णव. The वैष्णव group is of माह्वयत. The family deities of the *Karhādās* are देवीस. In कन्हाड देश they had a goddess called मातृका. At present the *Karhādās* above the Ghats and on the side of Rajapur are devotees of the goddess भवाभा (or महाकल्पी) of Kolhapur. The *Karhādās* who migrated to Goa during

1. Śīlāhāra Bhojādava's grant of A.D. 1191 to a गुर्जरवंशधर (Karhādā) Brahmin of *Kolhapur* (Rajapur Taluka) shows that the *Karhādās* migrated to Konkan about 850 years ago.

the last 200 years or so have become the devotees of the goddesses ललाटदुर्गा, म्हाळसा, म्हाळक्ष्मी, अजादुर्गा, विजयदुर्गा, etc.

(7) All *Karhādās* are *Rṣpedī* Brahmins of the मावजायनसूत्र, साकल-साखा. They have 24 gotras as follows :—

अत्रि, अगिरस, उपमन्वु, काश्यप, कुस, कौशिक, कौशिक, गार्ग्य, गौतम, जामदग्न्य, मैत्रुघ, शर्मिष, शारदायन, शर्मण, शारदा, शुक्ल, कौशिताल, बस, वासिष्ठ, वैश्व, विश्वामित्र, शारिष्य, शालास.

(8) Surnames of *Karhādū* Brahmins :—

अष्टे, अयापक, अधिकारी, अचूते, अयधित, भागळे, भागळे, भाचार्ये, भाज्ये, भाडव्ये, भावर्णे, भाडवणी, उंबरे, एड्डे, भोसले, भोसले, भोव्ये, कव्ये, कमळाकर, कपाळ, कर्करे, कर्जावंत, कर्वे, कळके, कात्रे, कानडे, कापरी, कावळे, काळे, काळवे, कडिंकरे, किडे, किराणे, कीर्तने, कुडवरे, कोटिभास्कर, कोळे, कोषाई, खेर, गगनदास, गाणपते, गर्गे, गलगावरे, गळ्यावरे, गुण्डे, गोडे, गोरे, गोसावरी, घव्ये, घुडे, चिळगे, चिमुंळे, चिचुडे, चिचे, जदार, जव्ये, जव्ये, जावडे, मोडी, धिडे, टंगणे, टेंडे, टोळ, टोळवे, ठकार, डगडवे, हांगे, धिके, डेगणे, डोंगरे, डवळे, डोळे, डोरे, दोस्ये, डोंकर, साटके, तांबे, तुळसुळे, तोतावे, तोपखाने, दणे, रामे, दक्षिण, रास, दीक्षित, दुबळे, दुमाळे, दुवेणे, देवपर, देवमक, देवचवळी, देसाई, प्रसु, पळसुळे, भाकरत, धोंडे, धोंडवे, नबरे, नवाच्ये, नाईक, नाखरे, नारव्ये, नानळे, नापळे, नारगवंकी, भारिगे, निकन, निखाडे, निखाळे, पखडे, पटवर्धन, पकी, पारबडे, पाटीळ, प्राणी, पित्रे, पिते, विपळवे, पुराणिक, पुरोहित, पंथित, फडे, फणगे, बळवे, वेडे, बहुतुळे, वाखरे, बोव्ये, विनीवाळे, बुगे, बुंदे, वेडे, बोकाडे, बोंदरे, बंदरे, भट, मधमडे, भागवत, भाट्ये, भासल, भाटवरेकर, भांबवे, भुगोळवे, भंदि, मडव्ये, मासे, महाजणी, माडी, मिरासी, मुळ्ये, मुळवरे, मुळवे, मुंघव्ये, मेमणे, मोघे, मंडलिक, तुके, योगी, रावते, रिंगे, रेडे, लघाटे, लखित, लुळुण्डे, लोके, लंबवरे, बळामे, वासळे, वागवरे, वाळवे, वांगवे, विळे, वैच, चहाळे, शोवडे, शीचे, शीळवे, शोत्री, पाणवली, सप्ये, सवे, सवेटवे, साळ्ये, साखरे, सावडे, सारमांडळे, सारमांडळीक, हचमोव, हवे, हळवे, हळवे, हचप etc. Besides these about 300/400 surnames are derived from place-names such as जमिळर, बाटेकर, etc.

Some surnames have *three gotras*, for instance बोंगरे, बोंडे, फणगे, सांबवे ; शोवडे has *four gotras* ; भाळ्ये has *five gotras* ; ठाकर has *six gotras* ; पटवर्धन has *three gotras* and भागवत has *seven gotras*. Mr. Gunjikar says that he is unable to account for these facts.

(9) Speaking of the professions of the *Karhādās* Mr. Gunjikar notes the following professions :—

1. One "कोषाई वासुदेवमह" lived at Benares between say A.D. 1600 and 1675 or so His endorsements appear as follows on two documents drawn up at Benares :—

(1) A.D. 1631—संमतिपत्र regarding सारस्वत Brahmins (vide p. 24 of Appendices to R. B. Gunjikar's सारस्वतीमंडल)—"कोषाई वासुदेवमहस्य संमतम्."

(2) A.D. 1657—मुक्तिमंथननिर्णयपत्र regarding देवर्षि Brahmins (vide p. 79 of विलेखे मंथन by R. S. Pimpulkar, 1926)—"समतं कोषाई वासुदेवस्य."

Priesthood; Clerical work; Holding offices of कुलकर्णी, देवाई and देवगु. Ruling states like *Jhansi* (owned by Govindpant Bundele and his descendants), *Sagar*, *Jāloṅ*, *Gulsarāi*, etc. in Northern India; Money-lending; Agriculture; working as *Haridāsas*, *Purāṇikas* and *Sāstiris*.

(10) Speaking of celebrities, authors, poets, etc. belonging to the *Karhādā* caste Mr. Gunjīkar notes the following :—

- (1) *Govindpant Bundele* (killed at Panipat in A.D. 1761).
- (2) *Lakṣmībāi*, the *Rāṇī* of *Jhansi* who died a heroic death in the rebellion of A.D. 1857.
- (3) *Baburao Baramatīkar* of *Bārāmāti*.
- (4) Learned men like *बाळमुकुंदराव* and his pupil *हज्जानह जाधवें*, and his pupils *विठ्ठलरावने देवरपुरकर*, *कृष्णाचार्य देवरपुरकर* and *जीवरावराव देवगाँकर*, etc.
- (5) *Kālinātha Pādhye*, author of *धर्मसिधु*.
- (6) *Ananta Sāstri Pendharkar* of Poona.
- (7) *Raghunātha Sāstri Talekar* and his son *Śrīkṛṣṇa Sāstri*.
- (8) *Gopāla Sāstri Ghāṭe*, author of the Marathi translation of the *Rāmāyaṇa*.
- (9) *Kālinātha Sāstri Pādhye* Gojvalkar of Bombay, the *Vaijyā-karaṇa* (Grammarian).
- (10) *Rājārāma Rāmakṛṣṇa Sāstri Bhāgavata*.
- (11) *Pādhye family* of Rajapuris noted for its learning.
- (12) *Moropant* (Parāḍkar) the renowned Marathi poet, who was proficient in both Sanskrit and Marathi poetic composition.
- (13) *Bāj Gaṅgādhar Sāstri Jāmbhekar* was a thorough gentleman and a perfect scholar. He was proficient in Marathi, Sanskrit, English and Latin, besides having knowledge of Hindustani, Gujarati, Bengali, Canarese and Persian languages. He is the author of many works in Marathi. He died a premature death. He was the editor of the first newspaper in *Mahārāṣṭra*, called *दर्शन* in which English writings were also published. He was also the editor of the first Marathi monthly called *विद्यार्जन*.
- (14) *Govind Viṣṭhal alias Bhāu Mahājan*, the learned friend of *Bāj Sāstri Jāmbhekar*. He conducted for some years the Marathi newspapers *प्रभाकर* and *पुनःकेतु*.
- (15) Learned men in high position like *विनायक जनाईन कीर्तने*, *नीलकंठ जनाईन कीर्तने*, *गजानन हज्जानह माटयबेकर*, *हेमचंद्र रामन कीर्तने* in the *Gaikwad State Service*.

- (16) *Śripād Bābaji Thākūr*, I.C.S., then serving as Asst. Judge at Thana.
- (17) *Dr. B. K. Bhatavadekar*, the most popular doctor at Baroda; *Bhāskar Hari Bhagawat*, Judge Small Cause Court, etc.
- (18) *Mr. Y. V. Athalye* (the editor of *Tarkasamgraha* in the B. S. Series) and *Mr. J. H. Athalye* the editor of *अण्णिय* (Marathi newspaper).
- (19) *Śankara Śāstri Devasthāli* of Savantwadi, a Sanskritist well versed in Marathi and English.
- (20) Among the families who practised *Sāvahāri* mention may be made of the *शोले* family of *Palaspe* near *Panvel*, *भेराड* family of Baroda now considered as *दक्षस्य* Brahmins and the *शिंदे* family of Indore.

The foregoing points from Mr. Gunjekar's account of the *Karhāḍā* Brahmins recorded 60 years ago will be useful for those who desire to make a historical study of the Deccani Brahmin castes. I am unable to verify Mr. Gunjekar's statements regarding the surnames and *gotras* of the *Karhāḍās* recorded by him. A complete census of all *Karhāḍā* Brahmin families of different surnames should be undertaken by some central *Karhāḍā Saṅgha* and on the basis of this census a preliminary hand-book should be accurately compiled with a view to get exhaustive information about each family recorded therein. Such a hand-book should contain accurate information on such topics as—*gotra, Veda, Śākhā, family deities, surname, native place of the family, present place of residence, profession, average annual income, information about family records of a historical nature, brief history of the family as known to the oldest member of the family, information about illustrious persons in the family, general educational progress of the family, intermarriages with other Brahmin castes in or outside Mahārāṣṭra, intercaste marriages, if any, and such other items*. A special form should be prepared and its copies broadcast to all *Karhāḍā* families and as soon as sufficient material is forth-coming it should be published in fascicules with a view to encourage collection of information from unknown sources. When the survey is complete an exhaustive index of places, persons etc. should be compiled and published. This will of course be a tentative *hand-book regarding the Karhāḍā Brahmins of to-day* but its value to all serious students of social history will be inestimable. It will also be of some use to ethnologists.

My present study is confined to the record of data bearing on the origin and antiquity of the caste-name *Karhāḍā*. This term has a geographical origin from the country of *Karahōṣṭaka* and its antiquity at least for one thousand years, if not more, has been established in this paper. It is too early to deduce any conclusions from this

antiquity as regards the exact time of the origin of this term. I must, therefore, close this long article by recording below the chronology of the data gathered from varied sources, both epigraphic and literary, to enable other scholars to probe the whole question deeper than I have done with my scanty knowledge of the history of castes in India. I shall feel thankful if the managing bodies of the different *Karhādī Saṅghas* take more active interest in the problems created by this paper and try to do their bit in solving them at least partially at a time when the joint-family system is totally disappearing and consequently the family history is getting obliterated to such an extent that some people do not even know their great-grand-fathers, much less their early genealogy or history. We are living in times when a revival of historical sense is dominant in the minds of the educated masses and many schemes of national histories are being formulated. No national histories can be perfect without a knowledge of the history of the families, which once made and unmade history as we know from the heroic endeavours of some of our past heroes. It is our duty to keep their memory green not only by a casual reference in a national history but by recording detailed history of the families which produced these heroes. A hero is both the creature and creator of the times he lives in, as said by Carlyle, and let the posterity know the full account of his kith and kin, the family he adorned and the circumstances which produced him.

CHRONOLOGY

REFERENCES

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| A.D. | "करहाटक" mentioned in the महाभारत (समापर्व) as conquered by सहदेव.
<i>Between 200 B.C. and A.D. 100</i> —References to <i>Karhād</i> in inscriptions quoted by Mr. Y. R. Gupte. |
| 250-300 ... | References to <i>Karhād</i> in Barhut inscriptions quoted by Mr. Gupte. |
| Before 317 ... | "करहाटक" mentioned in the महाभाष्यरी text translated into Chinese from A.D. 317 onwards. |
| 753 ... | "करहाटक" mentioned in a <i>Rāṣṭrakūṭa</i> copperplate grant. |
| 810 ... | "करहव" mentioned as the place of residence of a Brahmin भ्यासमह in a <i>Rāṣṭrakūṭa</i> grant. Mr. Gupte thinks that the expression "करहव माह्वण" = कर्वाहे माह्वण (of to-day). |
| 930 ... | "करहाटक माह्वण" numbering 240 (in a total of 1000) have been provided for in a <i>Rāṣṭrakūṭa</i> grant of a village दण्डकीपवन donated for feeding 1000 Brahmins.
"करहाटक" mentioned by सीमंदेव in his <i>बनहस्तिसहस्रम्</i> . |

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REFERENCES

- 993 ... करहाट Brahmins attained पदकर्मधिकार according to राजपञ्चकव्यलता of माधव composed in A. D. 1690.
- 1191 ... Bhojadeva of the Śilāhāra dynasty gave some land to गोविन्दमह गुरजर-पट्टवर्धन, a Karhādā Brahmin of नैपथ्य गोग्र (at Rajapur).
- 1191-1192 ... " करहाटक " and सह्यासी Brahmins mentioned as trustees for a grant made by Bhoja II (of the Śilāhāra line) for feeding " सह्यासी " Brahmins.
- c. 1250 ... " कन्हाडे ब्राह्मण " of फलेढान (or फलढण) associated with चक्रधर the founder of the महाभुजाय sect in the लोहाचरित्र.
- 1299 ... Grant of Raja Bimba to दुल्पोचम कापळे, a Brahmin of शुद्ध यजुर्वेदीय ब्राह्मण caste.
- 1448 ... " देवासन ब्राह्मण समुदाय " and " देवासन " persons mentioned in महिकावर्ताची बन्धर.
Reference to " गैयात्रिशंभ " on p. 59 of महिकावर्ताची बन्धर.
- 1488 ... The *Citpātan* surname " गोमले " recorded in a letter.
- c. 1450-1600... The भावे (चिपोलजे) family of Benares flourished. भावा रामकृष्ण → भावा विश्वनाथ → भावा गणेश (A.D. 1583).
- 1556-1592 ... भक्तवर्धय कालिदास (or गोविन्दभट्ट) describes his patron king रामचन्द्र वघेल of Reva in his panegyric रामचन्द्रशतश्लोक (Bikaner MS). In this work we find रामचन्द्र described by the epithets " मरहट्ट महोपतिवृत्तकरम् " " करहाटकभूपतिनिष्यनम् ". This is a reference to कन्हाड in the Satara Dist. by a Central Indian poet of Akbar's Court.
- 1583 ... " भावजे गणेश दीक्षित प्रमुल चिपोलजे (= चिपावन) signs a निर्णयपत्र drawn up at Benares.
" बखले कृष्णभट्ट प्रमुल कन्हाडे " of Benares and " शेष कृष्णमह-वडित प्रमुल महाराष्ट्र " also sign this निर्णयपत्र.
- 1630 ... " देशास्थ, चिचपावन, कर्नाटक " and " गुरजर " Brahmins of Bombay are mentioned in a letter.
- 1631-1657 ... Signatures of नारायण लक्ष्मीधर नारडे a *Karhādā* author on documents drawn up at Benares.
Signatures of " कोर्वाड वासुदेवमह " another *Karhādā* Pandit on these documents.

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REFERENCES

- After 1631 ... References to **करहाटक** Brahmins in **बादिजाफरखत** (B. O. R. Institute—Govt. MS No. 467 of 1881-87) which mentions surnames like कानस, बाकर, मानक, etc.
- c. 1660 ... "**चित्पावनजातीय**" author **विशनाथ महादेव रामे** composed some works for **Ramsing I** of Jaipur.
- 1676 ... "**देवास, कराडे, चित्पावन, पधे**" castes of **मदनगड** and **विशवाड** mentioned.
- c. 1690 ... References to **करहाटक** and **चित्पावन** Brahmins by **माधव** in his **सतगुरुचरितना**.
- c. 1680 ... "**चित्पावन विचकोर्त**" of **गुंनारपुर** (Ratnagiri Dist.) goes to **राहा** in Bengal and attains *Tāntric Siddhi*.
- 1685 ... "**करहाटक बाह्यमान**" mentioned by **संकराचार्य** of **गृध्रेश**.
- 1718 ... A "**बंणव करहाडा बाह्यन**" referred to.
The statement "**हुं करहाडा तुका कराड देरा**" mentioned in a document, which also refers to the *Karhādā* settlement at **कुवाड, फोडे, जांबोर्ला, पंचमहाल, सिधेश्वर, नाकोडे**. "**कराड जात**" of these places is mentioned.
- 1733 ... "**म्याती चित्पावन मनु सनवाई**" of **रामक्षेत्र** referred to in a letter to **Peshwa**.
- 1735 ... Reference to "**चित्पावन**" and "**कराडि**" woman by **Nārāyaṇ Dikṣita Pātāṅkar**, who complains to the **Peshwa** that the **Peshwa's** mother made unfair distribution of *dakṣiṇā* to different Brahmins at **Benares**.
- 1736 ... **बलराज** composed by a "**चित्पावन जातीय**" author.
- 1740 ... "**चित्पावन**", "**करहाडे**", "**करहाटक**", "**देवखे**" mentioned in **Cimāji Appa's** letter.
- 1746 ... "**चित्पावन जाती**" signatory to a "**संमतिपत्र**" from **Nasik** Brahmins. Usages of "**कराडी**", "**करहाडी**" in another **संमतिपत्र**.
- c. 1750 ... "**करहाडा**" mentioned in **कौकण-शास्त्रान**.
- 1751 ... Reference to "**कराडे**" Brahmins by **Bālkrṣṇa Dikṣita**. Reference to **करहाडे वासुदेवमठ मुने** by **Vāsudeva Dikṣita**.
- 1760 ... Dispute between **करहाडे** and **चित्पावन**—**Peshwa Sadashiv Rao** asks **Govindpant Kher** to settle it.
- 1775 ... **करहाडे** Brahmin Clerks in **Peshwa** service (15 *Karhādās* among 72; 7 *Karhādās* among 41).
- 1788 ... "**देवास, चित्पावन, करहाटक पुर्जे**" Brahmins of **Bombay** addressed to by **Benares Pandits**.
- 1848 ... **चित्पावन** and **देवखे** Brahmins mentioned in **पंडितराज बलर**.

Since drafting this paper I have received the following information about the *Karhādās* from Shrimant Balasaheb Pant Pratinidhi, B.A., Rajasaheb of Aundh, communicated to me in his letter of 11th November 1943 :—

"There are some Karada families in our District, with historical traditions; but they all date from the 18th century. They are the *Mahājani* (Diwan) and *Fadnis* families. There are also *Bhāguats* and *Tāmbes*, who prospered during the times of Shahu under the protection, of Brahmendra Swami. Near about Karad proper there are no Karada families with historical traditions. It is true that round about Karad there are some families who own lands but their lands have been acquired mostly in the later Maratha period either by gift or by purchase.

I feel that it is a mistake to regard the Karadas as Brahmins residing in the Karnataka territory. At one time the Karadas were not looked upon as Brahmins. A manuscript referred to by R. G. Bhandarkar states how when two or three Karada Brahmins entered a *समवेष्ट* the other Brahmins considered it a pollution and left the place. It appears to me that the Karadas were first recognised as Brahmins by the Shilahar Kings of Karad. That in my view accounts for the name Karada Brahmins.

Most Karada families trace their origin in the Goa territory. Their family goddess is usually in the Goa territory. They are the priests while the Gauḍa Sārasvata are the lay gentry. Even today the real Karada Centre is in Gomantaka. It is obvious that the first recognition of their Brahminhood took place at the Court of the Shilahara Kings of Karad. Later at Kolhapur under the patronage of the Shilaharas the Karadas prospered and many Karada families can be found in and round about Kolhapur. Everywhere, however, these persons were looked upon as Brahmins, who were recognised by the Kings of Karad and hence called Karade Brahmins. The *Diwans* (Mahājani) and *Fadnis* (Khandekar) of whom we hear during the last century, came to Satara from Konkan side during very modern times. In fact the name *Karādā* does not suggest that these Brahmins resided in Karad territory."

I am very much thankful to the Rājāsāheb of Aundh for his kindly sending me the above information. The *Gode* or *Ṭhākūr* family of Karhādā Brahmins to which I belong has been associated with the Pratinidhis since A.D. 1748, when my ancestor Nāro Rāyāji Ṭhākūr led a successful expedition on behalf of the Pratinidhis against Tulaji Angria and demolished his newly founded fort the Mudgād to the ground. Naro Rayaji obtained two villages as *Khoti Inām* viz. Devada

and Bhudkerbe at the foot of the Vishalgad fort. These villages are still with us as a relic of our association with the house of the Pratinidhis of Vishalgad. It is a happy coincidence that a descendant of Naro Rajaji Thakur (or Gode) should be associated with the illustrious descendant of the Pratinidhi family not on the battle-field but on the field of Oriental learning since April 1919, when the Bhandarkar Oriental Research Institute commenced its work on the Critical Edition of the *Mahābhārata* with the munificent support of the Rājāsāheb of Aundh and when I entered the service of this Institute as its Curator.

2. SOME KARHĀDE BRAHMIN FAMILIES AT BENARES BETWEEN A.D. 1550 AND A.D. 1660*

In the *Nirṇayapatra*¹ drawn up at *Muktimaṇḍapa* in Benares in A.D. 1583 (Saka 1505) we find the signature of one *Bakhale Kṛṣṇabhajja* who calls himself "*Pramukha Karhāde*" or leader of the Karhāde Brahmins, obviously resident of Benares. It is clear from this reference that a few Karhāde² Brahmins had settled at Benares in Akbar's time, if not somewhat earlier. To corroborate this inference we must try to record some evidence about the families of Karhāde Brahmins that were resident of Benares in the latter half of the 16th century and the first half of the 17th century. I propose in this paper to point out that at least two more Karhāde families with the surnames *Koḍī* (कोडी) and *Āraḍe* (आरडे) respectively were resident of Benares during the above period as will be seen from the following references:—

1. Mr. V. V. Athalye in his *History of the Karhāde Brahmins*, Poona, 1947, records 16 families of Karhāde Brahmins of *Gautama gotra* (p. 48) among which we find a family of the surname "कोडी."

2. The Anup Sanskrit Library, Bikaner, contains a Ms of *Aitareyāranyaka* written at काशी or Benares in *Samvat 1639* (= A.D. 1582) by one "कोडी शैलधर" (*Ms No. 33*, p. 34 of the *Catalogue* of this Library by K. M. K. Sarma and C. K. Raja, Bikaner, 1944). Evidently "कोडी शैलधर" was a Karhāde Brahmin, contemporary with बलदेव कुलकर्णी (A.D. 1583) referred to above as the leader of *Karhāde* Brahmins. The *gotra* of the *Bakhale* family is काश्यप.

3. Further evidence about the existence of the कोडी family at Benares is forthcoming from the *Sammatipatra*³ of A.D. 1031 (Saka 1687 of Vikrama Era) drawn up at Benares. This document contains the following endorsements:—

- (१) "आर्येण नामक नारायणभट्टानां संमतम्"
(२) "कोडी शैलधरस्य संमतम्"

* *Journal of Kalinga Historical Research Society*, Vol. II, No. 2, pp. 111-114.

1. Vide pp. 76-77 of *Chitalābhajja Prakarana* by R. S. Pimputkar, Bombay, 1926. This *Nirṇayapatra* is signed by भाष्ये गणेश दीक्षित who calls himself प्रमुख चित्तालने or leader of the Citpāvan Brahmins. I have identified this भाष्ये गणेश दीक्षित with भाष्ये गणेश the pupil of *Vijānabhikṣu*, the celebrated philosopher of Benares (vide *Adyar Library Bulletin*, Feb. 1944, pp. 20-28).

2. On the antiquity of the caste-name "*Karhāḍaka*" or *Karhāde* Brahmins see my paper in the *History of Gujya Family* by V. T. Gunc, Poona, 1944, Appendix II, pp. 1-53.

3. Vide R. D. Gunjiker's *Sarasvatī-Muṇḍal*, Bombay, 1884, Appendix, pp. 22-24. Mr. Gunjiker in his list of [Karhāde] surnames (p. 165) mentions आर्ये, कोडी, etc. but does not specify their *Gotras*.

According to Mr. V. V. Athalye (History of Karhādā Brahmins p. 51) there is a Karhādā family of the surname "कार्हेकर" alias "भारखे" of नारायणगोच. भारखे is identical with कार्हे. Evidently नारायणभट्ट कार्हे of 1637 A.D. belonged to this family and बासुदेवभट्ट, his contemporary, belonged to the कोबाह family.

4. The two Pandits of Benares viz. (1) नारायणभट्ट कार्हे and (2) कोबाह बासुदेव भट्ट referred to above in the document of A.D. 1613 were living in A.D. 1657 because they have signed another document, which is a *Nirṇayapatya*, drawn up at *Muktimaṇḍapa* in Benares in A.D. 1657 (vide p. 79 of पितृभेदग्रन्थ प्रकरण referred to above). Their endorsements on this document are as follows :—

“समस्त कोबाह बासुदेवरय ।”

“समस्त नारायणभट्ट भारखे ह्यसुपनामः ।”

It is clear from the above endorsements that these two Karhādā Pandits lived at Benares say between A.D. 1625 and 1660. They were contemporaries of other co-signatories, some of whom bear Mahārāṣṭra surnames such as काळे, टकाळे, दशपुत्र, विद्वांस, दातार, कोरडे, महापात्रे, नारायण, वैकुण्ठरावण, कद्रे, काव्यात्रे, पाटलकर, हांसिन, ज्योतिर्विद्, (पालगो देतकर) or जोशी, ज्योतिर्विद् or जोशी (दामोदकर), माधे, घुमरे, पोल, साडे, पोटे, etc. Some of these surnames belong to the *Citpāvan* Brahmins, while others belong to the *Delastha* Brahmins of *Mahārāṣṭra*. It is worth while tracing the history of all these surnames in sources earlier than A.D. 1600.

5. As two members of the कोबाह family viz. (1) भैरवभट्ट of A.D. 1582 and (2) बासुदेव भट्ट (A.D. 1631, 1657) are referred to in three different documents between A.D. 1582 and 1657 we have reason to believe that this *Koḍai* family was resident of Benares say between A.D. 1550 and 1660. Perhaps बासुदेवभट्ट कोबाह may have been either the son or the nephew of भैरवभट्ट कोबाह. It remains to be proved if these two Pandits of the *Koḍai* family produced any literary works.

6. The *Ārḍe* family, however, produced some authors as I have shown in my paper "Some Authors of the *Ārḍe* Family and their Chronology—between A.D. 1600 and 1825" (Journal of the Bombay University, September 1943, Vol. XII, part 2, pp. 63-69). *Nārāyaṇabhaṭṭa Ārḍe* appears to have lived at Benares between A.D. 1600 and 1670 and composed such works as *गृह्याभिसार*, etc. He mentions in his *गृह्याभिसार* (Ms of A.D. 1727) the name of his father viz. लक्ष्मीधर, who must have lived between say A.D. 1550 and 1620. He may be looked upon as a contemporary of भैरवभट्ट कोबाह (A.D. 1682), and कृष्णभट्ट बसले (A.D. 1583).

7. Since the publication of my papers on *Ārḍe* authors Mr. S. L. Katre of the Scindia Oriental Institute, Ujjain, has published an excellent paper on "*Nārāyaṇabhaṭṭa Ārḍe, His Works and Date* (vide pp. 74-86 of *Bhāratīya Vidyā*, Bombay, March-April 1945). The following points from this paper may be noted here :—

- (i) The *Ārḍe* family belongs to the भारतवासी.
- (ii) This family has its basic residence in some villages near Sawantwadi and Goa in Konkan.
- (iii) Two branches of this family migrated to *Benares* (U. P.) and *Saugor* (C. P.) respectively.
- (iv) The *Saugor* branch is still there but the *Benares* branch is extinct.
- (v) The daughter of the last male member of the *Benares Ārḍe* family was married in the *Pādhye-Gurjar* family a hundred years ago. Her son inherited the estates of the *Ārḍe* family. His descendants still flourish at Benares.

(vi) The Baroda Ms of गृह्यप्रिसागर by नारायणभट्ट बाबे is dated A.D. 1690 as I have already pointed out (vide page 27 of my paper on *Karhāḍā* caste-name in the *History of the Guṇye Family*). There are three Mss of this work in the Library of the Scindia Oriental Institute, Ujjain. One of these Mss (No. 5642) bears the exact date of composition of this work which is "April 1640" (*Caitra of Samvat 1697*). This work was completed by its author at "मगधनगर" which is possibly identical with Hyderabad (Deccan).

(vii) Nārāyaṇabhaṭṭa's गृह्यप्रिसागर (A.D. 1640) mentions thrice his own आदिसागर of which a rare Ms belongs to Mr. S. L. Katre's family. Mr. Katre records a list of the numerous works and authors referred to in the आदिसागर by Nārāyaṇabhaṭṭa. In this work the author states that he composed the आदिसागर at the instance of one बसवण (ण) दंडित who may be a resident of Bhāgānagar or Benares.

(viii) Aufrecht records a Ms of Nārāyaṇabhaṭṭa's संस्कारसागर (C. C. I, 682).

(ix) Nārāyaṇabhaṭṭa composed a work called "पूजासागर" (Ms No. 6241 of the Scindia Oriental Institute). This work has been analysed by Mr. Katre. At the beginning of the work the author tells us that he composed this work in the vicinity of a shrine of *Ganeśa* at पुणेग्राम (Poona) at the bidding of one गोपालभट्ट, a protegee of नारायणभट्ट बाबेकर the Chief priest of King Śahāji (father of Shivaji), A.D. 1595-1664. The author also records the date of composition of the works viz. March 1651 (*Phālguna, 1572*).

(x) Nārāyaṇabhaṭṭa refers to his आदिकसागर (in his पूजासागर) but no Ms of this work has yet been traced.

(xi) Nārāyaṇabhaṭṭa refers to his होम (सागर ?) in his पूजासागर (संस्कारस्तु होमे चक्षते). Perhaps he had projected some such work as होमसागर. No Ms under this title has been traced.

(xii) *Nārāyaṇabhāṭṭa's* "स्मार्तवायचिन्त" is only a major section of that title from the गृह्याभिधानगर. Some Mss of स्मार्तवायचिन्त are found in some private collections at Benares.

(xiii) *Nārāyaṇabhāṭṭa's* विष्णुविष्णु is represented by Ms No. 5345 in the Library of the Scindia Oriental Institute.

(xiv) Aufrecht records some Mss of *Nārāyaṇabhāṭṭa's* आदिसागर which appears to be an extract from his आदिसागर.

(xv) अक्षयमकारिका of *Nārāyaṇabhāṭṭa* mentioned by H. P. Sāstri (Notices, Second series, Vol. III, 1907, p. 171) seems to be an extract from some major compilation of this author.

(xvi) *Nārāyaṇabhāṭṭa* has been quoted as authority by a subsequent author *Nārāyaṇa Kumbhari*.

8. The *gotras* of three different Karhāḍe Brahmin families resident at Benares between c. A.D. 1550 and 1660 are as follows :—

१. बसले—काश्यपगोत्र
२. भारदे or भारदये—भारद्वाजगोत्र
३. कोबाई—गौतम गोत्र

I cannot say if these families had any inter-relation by marriage among their members, though there is every possibility of such relations owing to the limited number of the *Karhāḍe* families at Benares during the period A.D. 1550-1660.

3. THE ANTIQUITY OF THE CASTE-NAMES

SĀLI AND PADMASĀLI*

In the *Mahārāṣṭriya Jñānakōśa*¹ we find an article on the *Sāli* caste which is based on the information supplied to the Editors of this Encyclopaedia by a member of this caste. But this information is not substantiated by reliable documentary evidence. Even if we presume it to be reliable in material particulars it is difficult to use this mixture of fact and belief for any historical studies about this caste. We must, therefore, verify the information from available records and try to link up at least a portion of these data with authentic history, social or political.

It is difficult to assess the exact historical value of the *Māhātmya* and the *Purāṇas* and consequently it is difficult to say anything with certainty about the genuineness or otherwise of the *Sālimāhātmya Purāṇa*. In view of this difficulty we must study the antiquity and history of this caste on the strength of external evidence. For this purpose we must record evidence about the antiquity of the caste-names² current in India at different times as caste-nomenclature³ is the result of caste-consciousness in a social group and the history of this group lies behind the caste-nomenclature, the antiquity of which needs to be traced to its source as far as possible.

* *Journal of G. Jha Research Institute*, Vol. II, Part I, pp. 59-68.

1. By Dr S. V. Ketkar, Vol. XXI, (सं १७७). This article records information about the sub-caste *Śvakula Sāli*. The members of this caste number about 50000 and they are scattered over Mahārāṣṭra, Berar, Nagpur and Karmāṭaka. There are six sub-castes of the *Śvakula Sāli* caste, viz., (1) अछेरे (अछेर), (2) शुद्ध (सुत), (3) ठिकके, (4) बागड, (5) गुजरा, (6) पद्मसाली. No inter-marrriages are allowed among the members of these castes. Generally the Deśastha Brahmins work as their priests. A work called *साक्षी माहार्णव पुराण* is considered sacred by the members of these castes. It is said to have been composed by the sage Atri (in Sanskrit). An adaptation of this *Purāṇa* in Prākṛit called *सूक्तसौमिलमाहार्णवपुराण* is said to have been composed by मातृदास before A.D. 1213 (=Śaka 1135). This *Purāṇa* gives the origin of the *Sāli* Caste (information supplied by Mr. G. G. Shere of Sagar).

2. I have published the following papers on the caste-names current in the Deccan :—

(1) The antiquity of the caste-name "Śepvī" (*The Bombay University Journal*, Vol. VI, Pt. VI, pp. 152-155).

(2) Caste-name Gābit (*Sardesai Commemoration Volume*, 1938, pp. 213-222).

3. Vide *Indian Caste* by John Wilson, Vol. I, 1877. On page 40 we find a table of castes as mentioned in the *Brahma-Vaivarta Purāṇa*, in which कुम्भिक or weaver is said to have Viśvakarmā as his father and a Sūdra woman as mother. Wilson refers to 4 lists of Castes as follows :—

(1) Lists given in the *Manu-Smṛti*.

(2) Lists presented to the British Government by the Poona Brahmins (pp. 65-70).

The *Bombay Gazetteer*¹ shows the presence of the people of the *Sāli* caste in the different districts of the Bombay Presidency. In view of this fact we are naturally curious to know the history of this caste and its sub-divisions during the course of the evolution of the Hindu Society as it exists today.

The Marathi lexicons² do not record any historical usages of the term *Sāli*.³ I shall, therefore, try to record a few such usages found by me in works of the 17th century. The Mahārāṣṭra Saint Tukārām refers to a man of the *Sāli* caste in the following lines⁴ in his *Gāthā*:—

“मजसचें मकी वेष्ट। मग्ने साळी कांही कोष्ट।”

Here *साळी* is contrasted with *कोष्ट*. The *कोष्टी* is explained by Molesworth as a spinner and weaver but he further states that the men of the *कोष्टी* caste agree with the men of the *साळी* caste in occupation but differ in caste. This explanation agrees with Tukārām's remarks viz.

“मग्ने साळी कांही कोष्ट।”

(3) List by Colebrooke (*Asiatic Researches*, Vol. V).

(4) List found in the *Jānivārka*.

Wilson states that none of these lists altogether agree with one another. This fact establishes the fictional character of the caste arrangements especially of the *Mixed classes*.

In List No. 2 mentioned above we find the *Sāli* and *Koṣṭi*.

“*Shāmbhava-Sāli Weaver*” born of *आयतक* and *बेन*.

15-*Kṛāvinda-Koṣṭi Weaver* and *Spinner* born of *आयतक* and *कुणकुट*.

1. Vide Index to the *Bombay Gazetteer* 1904, p. 326—“*Sāli*; a caste of weavers in *Ratnagiri* district, X, 125; in *Thana* district, XIII, 134; in *Nasik* district, XVI, 53; in *Ahmednagar* district, XVII, 130-131; in *Satara* district, XIX, 93; in *Sholapur* district, XX, 137; in *Belgaum* district, XXI, 147-47; in *Dharsur* district, XXII, 177-178; in *Bijapur* district, XXIII, 277-79; in *Kolhapur State*, XXIV, 95; in *Poona* district, XVIII, Pt. 1, 361-365; in *Kolcha* district, XI, 65; in *Khandesh* district, XII, 75, 229, 234.

2. Molesworth (*Marathi-English Dictionary*, Bombay, 1857) explains the word *साळी* as a class of weavers (in cotton or silk) or an individual of it:—Proverb “*साल्याची गाय माळ्याचें बालक*” used where things wanted are gathered from all quarters.

3. A few remarks about the *Sālis* from the *Bombay Gazetteer* may be noted here:—They claim descent from *Vastradhāri*, the robesman of the gods, whom the gods accompanied on earth in the form of useful tools. Their family gods are *Bahirōs* of *Sonari* in *Ahmednagar*, *Devī* of *Tuljapur* in the *Nizam's* country, and *Khandoba* of *Jajuri* in *Poona*. They belong to four divisions (1) *Sakul*, (2) *Nakul* (or *Lakul*), (3) *Padam* and (4) *Chāmbhār*, *Sālis*. *Sakul Sālis* are the pure descendants of the founder of the caste. *Lakuls* are bastards, *Padmas* are *Telangs* and *Chāmbhārs* are of unknown origin. *Sakuls* neither eat nor marry with the other three divisions. *Lakuls*, *Padmas* and *Chāmbhārs* neither eat together nor inter-marry but all eat from *Sakuls*..... They worship all *Brahmanical* and other gods and keep all *Hindu* fasts and feasts. Their priest is a village *Joshi*..... They have no religious teacher..... They have a caste council. They burn their dead and mourn ten days. (See pp. 130-131 of *B. Gaz.* XVII, *Ahmednagar*).

4. *Tukārām's Gāthā*, ed. by R. V. Madgaonkar, Bombay, 1886. *Abhang* No. 277.

Another reference to the *Sāli*¹ and the *Koffi* is found in the work *Kāyasthadharma-Pradīpa* of Gāgābhāṭṭa who officiated at the coronation of Shivāji the Great in A.D. 1674. In this work Gāgābhāṭṭa gives us the definitions of several caste-names current in his time and also indicates their vernacular equivalents as the following extract will show :—

“संगता वेन वनिता वर्तकेन यदा रहः ।
नस्यां शाबरकाभिस्यः पुत्र मूढक संमतः ॥
स हीनस्त्वप्यजातिभ्यः शुचिवासो विद्यायकः ।

अथ साळी² इति भाषाप्रसिद्धः

अमीर कुम्कुटाभ्यां वो जातः सौबीरसंज्ञकः ।
स कुर्यात्सरीणां च वसनाभ्यामवृत्तये ॥
सुद्वेरीत्याद्यो जातो निळीकृतो स कल्पते ।
कोसाटा इति बंगालदेशाभाषाप्रसिद्धः ॥”

1. Sardar G. N. Mujumdar has published a list of articles of grocery pertaining to Shivāji's times, i.e., 17th century (B. I. S. M. Quarterly, May 1940, Vol XX, No. 4, pp. 157-161). On p. 160 of this list there is a reference to साळी, कोरेटे, रंगारो, धनगर, गौली. This reference to *Sālis* and *Koffis* supports Gāgābhāṭṭa's usage of these terms c. 1674 A.D. Tobacco or तंबाखू is mentioned twice in this list. The list is of importance to the student of Economics of the Maratha period of history. It mentions other articles of trade such as—गुलाब, मधक, पारा, मोरचूत, अरगजा, तुर्दी, सज्याकार, साकर, सोमोले, मनसोल, रेवनिनी, कृष्णागर, चोपनिनी, ऊद, तरकारी दानिबे, मढेबे कणसे, फणसपोली, etc.

2. It is difficult to say how far Gāgābhāṭṭa's definition of the term *Sāli* is correct historically. At the best he has only recorded the Shāstric view of the term *Sāli* and its verification on the strength of historical evidence needs to be attempted by the students of history and sociology as well.

In the ज्ञातिविवेकमकरण of a work called the स्मृतिमहाराज by कृष्णराज (MS No. 347 of 1887-91) we find definitions of several castes (*jātils*). On folio 19b of the above MS the definition of कुर्विद or weaver is recorded and the vernacular term साळी for कुर्विद is also noted :—

“तृतीये दिवसे गत्वा शूद्रो मोहाद्वज्वला ।
यं पुत्रं जनयेत्सौत्र कुर्विद इति कर्तितः ॥
कुर्यान्मूलनवस्त्राणि जीवेत्तद्विक्रयेण च ।
द्वित्रसेवा सदा कुर्यात्सास्य काव्यपराजिता ॥ कुर्विदः । साळी ॥”

No chronology of the स्मृतिमहाराज has been given by Prof. Kane (vide pp. 670 and 688 of *History of Dharma*, I, 1930). Its author कृष्णराज was a king of Mahārāṣṭra. On folio 12 the definition of साळी is recorded as follows —

“संगता वेन वनिता वर्तकेन यदा रहः ।
तस्य शाबरकाभिस्यः पुत्रो सौलोक विभुतः ॥
स हीनस्त्वप्यजातिभ्यः शुचिवासो विद्यायकः ।
वेन वनितेति । आवर्तको वैष्णवो गायको ब्राह्मणमेति ॥

daya and Iyer this story¹ has no evidential value in proving the antiquity of the term *Sālī* or *Padmasālī*. In the same manner Mr. Stuart's note regarding the origin of this caste, which refers to the migration of the *Sāliyas* from their Andhra home to the territory under the jurisdiction of Rājarāja I, needs verification on the strength of contemporary historical evidence. At any rate no such evidence has been recorded by the above authors in their book under reference.

The principal groups of the *Sāle* caste are as follows :—

- (1) *Padmasāle*. (2) *Pattūsāle (silk)*. (3) *Sakunsāle*.

Here again we are told that the origin of these subdivisions is not clear. The *Padmasāle* division is, however, more important than the other two divisions. According to tradition current among the *Sāle* caste the members of this caste emigrated from Vijayanagara territory, in particular from Hampi during the time of Kempe Gauḍā. If this tradition is correct the migration of the *Sāles* from the Vijayanagara territory can be said to have taken place about the middle of the 16th century as Kempe Gauḍā of Bengaluru flourished about A.D. 1558.² While dealing with the textile industries during the period of the third dynasty of Vijayanagar Prof. Ramanayya³ gives us some valuable information about the *Sāles*. Three references from this information may be noted here as they are of historical value :—

(1) An inscription⁴ of Andirāju Koḍūr mentions two classes of looms, *toḡāṭa maggas* and *Sāle-maggas*.

(2) According to the *Āmuktamālyada*⁵ of Kṛṣṇadevarāya (4-35) the weaver caste had divisions of the names : *Padmasāles*, *Sāles*, *Jāṇḍras*, etc.

(3) The *Atthavana Tantram*⁶ divides the weavers into two classes : (i) *Kuruhas* and (ii) *Sāles*.

1. Vide footnote on p. 560 of *Myore Tribes and Castes* where Mr. Stuart's remarks regarding the origin of the Sālī caste are reproduced as follows :—

"They claim to be the descendants of the sage name Mrikanda, the weaver of the gods. Their original home appears to have been the Andhra country from whence a section of the *Sāliyas* was invited by the Chola king Rājarāja I after the union of the Eastern Chalukya and Chola dynasties"—*Census Report of Madras for 1801*, p. 285.

2. B. A. Saletore, *Vijayanagara Empire*, Vol. I, p. 320.—"A prominent example of a chieftain being punished is that of Kempe Gauḍa of Bengaluru. This chief in about A.D. 1558 was imprisoned by Rāma Rāja for exceeding the powers of a feudal lord and coining *Bhīre-Deva-Pagodas*."

3. *Studies in the History of the Third Dynasty of Vijayanagara*, by Prof. N. V. Ramanayya, Madras, 1935, p. 304.

4. *Local Records* by C. P. Brown I, pp. 11-13.

5. This "sublime poem" was composed by Kṛṣṇadevarāya himself (see p. 434 of *Third Dynasty*).

6. The *Atthavana Tantra* is a work on revenue administration—*Ibid* p. 111. (*Machensis Manuscripts* 15-6-8—According to *Atthavana Tantra* all *adāsira* connected with the revenue of the state were under the jurisdiction of the *Atthavanas* or *Sindmāla*).

The foregoing evidence appears to establish the fact that the *Sāles* and *Padmasāles* as caste-names were current in the first half of the 16th century within the confines of the Vijayanagara Empire. This conclusion is further supported by an inscription recently published by Mr. M. R. Kavi in the *Annals* of the S. V. Oriental Institute, Tirupati. This inscription is dated *Śaka 1463 (Subhakti, Kārtika Sukla 15) = A.D. 1541* and "records the gift of 10,000 *varāhas* by the leaders of the *Padmasālā* sect to Tallapaka Tiruveṅḡalanāthayya with an annual subsidy of one *aparañji rūka* (gold coin) for each loom and one *rūka* on the marriage occasion in their families..... The gift of *aparañji rūka* levied annually on each loom of their caste and of *rūka*—the marriage gift—were intended for the expense of the donee's charities and household expenses."

The occasion for the above grant of A.D. 1541 as detailed in the inscription itself and summarised by Mr. M. R. Kavi is as follows :—

"A contest took place between the *Padmasālā* and *Jaṇḍra* castes whether which of the two castes were descendants of the family in which the Goddess Lakṣmī was born. Tiruveṅḡalanātha, the donee, took the leaders of the two castes to Tirucūr and before the whole congregation induced Goddess Padmāvati herself to declare that *Padmasālās* descended from the family of her parents and the charities of the *Jaṇḍra* people could not have greater claim over those of the *Padmasālā* caste. This service of Tiruveṅḡalanātha the donee, had to be rewarded by the gifts mentioned above..... The *Padmasālā* weavers having been admitted as possessors of superior rights and duties in the charities to be made for God Viṣṇu and his consort Lakṣmī were pleased to make the grants." Mr. Kavi further tells us that the same matter with the same donors and donee as in the above inscription is noted in an inscription recorded in Mackenzie collection Vol. No. 15-4-18, p. 57 and in its copy—*Local Records* Vol. 48, p. 443 in the Govt. Ori. MSS Library, Madras. The occasion for the above grant was also a contest between the *Padmasālās* and *Jaṇḍras*. The above inscription is dated *Śaka 1493 = A.D. 1571*. It extols the weaving skill of the *Padmasālās*, which extends to the spinning and weaving of the threads of the divine lotus which adorns the navel of God Viṣṇu out of which they supplied the divine clothes to various gods in Hindu pantheon. Other points of interest bearing on the ancestry and tradition of the *Padmasālās* noted by Mr. Kavi from the inscription may be briefly noted here :—

(1) The *Padmasālās* are descended from *Bhāvanamaharṣi* who sprang from the *homakupḍa* of sage Mārkaṇḍeya.

1. Vol. I, Part I, March 1940, pp. 89 ff., Copper-plate Inscription of Tallapāka Tiruveṅḡalanātha issued from Tirucūr.

(2) *Pañca-r̥ṣi* was a brother of *Bhāvana*, who seems to have married the daughter of sun (probably virgin *Bhadrāvati* mentioned in line 88 of the Inscription).

(3) Certain members of the caste achieved some heroic acts and thus procured titles for the whole caste.

Mr. Kavi informs us further that "these weavers are said to reside in every town, particularly in—

Tirupati, Candragiri, Srirāṅgam, Conjeevaram, Trichinopoly, Chennai (Madras), Kālahasti, Veñkṭagiri, Vellore, Nellore, Podi, Udayagiri, Golkonḍa, Penugonḍa, Inugonḍa (in Guntur district?), Kāṇḍanūm, Jagannātha, Delhi, Aurangabad, Rāyadurg, Avaku (in Kurnool district), Gurrambakonḍa, Gooty, Koṇḍividu, Bhallapura (in Bellary?), Srirangapatam, Ahmednagar, Bangalore, Cuddapah, Siddhavatam, Rajamundry, Chirala, Perala, Mangalagiri, etc."

My object in collecting together the foregoing information in detail is mainly to provide data¹ to the historians of caste in India and also to record documentary evidence regarding the antiquity of caste-names *Śālī* and *Padmasālī* now current in the Bombay Presidency and outside.

The following table will give at a glance the chronology of the usages of these caste-names :—

A.D.	Source	Caste-name	Remarks
1509-1530	Āmuktamālyada of Kṛṣṇadevarāya	<i>Padmasāles</i> , <i>Sāles</i> , <i>Jāndras</i>	
1541	Copperplate inscription of Tiruveṅṅalanātha	<i>Padmasālā</i> , <i>Jāndra</i>	Cf. tradition about the migration of <i>Sāles</i> from Vijayanagara in Kempe Gauda's time (c. 1558 A.D.)
1571	Mackenzie Collection Inscription	<i>Padmasālā</i> , <i>Jāndra</i>	
	Tukārāma's Gāthā	<i>Sālī</i> , <i>Koṣṭā</i>	
c. 1674	Gāgābhaṭṭa's Kāyas- thadharmā Pradīpa	<i>Sālī</i> , <i>Koṣṭā</i>	Sanskrit " <i>Samilaka</i> " a term current in Bengal according to Gāgābhaṭṭa

1. Though the caste-names are included in Dictionaries of different vernaculars it is necessary to prepare a special *Dictionary of Caste-names* with a view to help historical and sociological study of Indian castes. In the same manner a Dictionary of Surnames current in India is also a desideratum to facilitate an accurate exploitation of all available sources bearing on Indian Sociology. Even the usages of the term "*Upādama*" (= Surname), which is comparatively a modern product, have not been recorded in any responsible publication. In the absence of such helpful, though mechanical work, the study of an individual problem becomes a herculean task.

4. CASTE-NAME "GĀBIT" *

In November 1937 my friend Rao Bahadur Wasudev Anant Bambardekar of Bandra (Bombay) requested me to throw some light on the history of the caste-name "gābit."¹ Being interested in the antiquity of caste-names now current in India and particularly those current in the Deccan and having already written a short note² on the antiquity of the caste-name "tepoī," I could not resist the temptation of going a little deeper in the history of this caste-name, though by habit and training I can hardly call myself either a philologist or a historian qualified to undertake a complicated problem of a historical study of Indian caste-names. I was, however, convinced that for a true understanding of these caste-names a systematic record of the actual usages³ of these names in definitely dated historical documents was an essential preliminary before any attempts are made to interpret them. In short textual criticism should be the *terra firma* on which all interpretative criticism should be based.

Let us now turn to some of the explanations of the term "gābit" as are found recorded in the Marathi dictionaries.

The *Mahārāṣṭra Śabdakoṣa*⁴ that is being published by the Mahārāṣṭra Kōsamanḍa], Poona, explains the word as follows:—

GĀBIT or GĀBDĪ—(Masc.), (Rajapur), GĀBIT; GRĀBTĪ; KHĀRVI; KOLĪ; a fisher-man; a Konkan caste; (vide Jñāna-kōśa, p. GA—101).

* *Sardesai Commemoration Volume*, 1938, pp 213-222.

1. Vide *Caste and Tribes of Bombay* by R. E. Enthoven, Vol. I, Bombay, 1920, pp. 347-350. *Gābits*—number 24233 (11569 males, 12664 females) reside on the Sea Coast—Ratnāgiri, Kanara, Savantvadi—a few families at Surat, Kolaba, Thana and Janjira—call themselves Konkani Marathas—descendants of Marathas who manned Shivaji's navy—Some of them are still called *Gurabāndels*—they are chiefly fishermen and sailors—in some places they have *gotras*,—probable Maratha origin of the Caste—Goa, the original home of *Gābit*—During Portuguese insurrection they fled to Ratnāgiri and Kanara—those who remained in Goa: were converted to Christianity—their *gotras* according to some accounts:—Atri, Bābhra, ya, Bhāradvāja, Gārgya, Kapila, Kātyāya, Kauṭika, Śāṅgilya, Vasiṣṭha, Vata—According to other account the whole caste has only one *gotra Kātyāya*—family stocks: Bhoṣale, Jadhav, Ghorpade, Dabhade, Dhamaḷe, Shinde, Chavan, Kubal, Tawade, More, Nikam—Polygamy is allowed and practised but polyandry is unknown.—Widow re-marriage, permitted—Gābits follow the Hindu law of inheritance and belong to Hindu religion—Śaṅkarācārya of Saṅkeshwar is their spiritual guide—Their priests are Chitpavan or Karhādā Brahmins—The dead are either burnt or buried—Śrāddha is performed annually.

2. *Jour. Bomb. Uni. May*, 1937, pp. 152-155.

3. Such record of chronological usages will be found in such works as *Hobson-Jobson* (second edn. by Crooke, London, 1903) and other scientifically compiled lexicons as the *Oxford Eng. Dict.*

4. *Mahā. Śabda*, Poona, 1934, Part III, p. 978.

Arabic—*Ghurāb-Grāb (Gurāb)*—an Arabic shipping vessel. The Maratha warriors who manned such a ship were called *GRĀBTĪ* or *GĀBTĪ*. This word became current in the time of the great Maratha king Shivaji.

Proverb.—“*Gāodyās gurān, gurākhyaś tārān.*”

GRĀBTĪN—fisher-woman.

I have rendered into English the extract from the *Śabdakośa* without disturbing its sense with a view to investigate the problems it raises, viz.—

1. That the word “*gābīt*” is a caste-name.
2. That it is derived from the Arabic name: *GHURĀB, grāb* or *gurāb*, meaning a vessel.
3. That the word became current in Shivaji’s time.

According to the information recorded in the *Mahārāṣṭra Jñāna-kośa*¹ the total population of the *GĀBTĪ* caste in 1911 was 24,818. Men of this caste generally reside on the sea-coast and are found in the districts of Ratnagiri, Kanara and Savantwadi State. The origin of the word *GĀBTĪ* (*GĀBĪT* or *GRĀBTĪ*) is traditionally explained by its reference to the Arabic word *GRĀB* which means a ‘gunboat’. The Konkani Marathas who manned these gun-boats were called *GRĀBTĪ* or *GĀBTĪ*. “The word *GĀBĪT* is not the true word”² but it is only used in the Census Reports. The ancestors of the *Gābīt* caste people of the present day were formerly employed by Shivaji in his navy, and consequently men of this caste are found in large numbers in sea-side places like Jaitapur, Vijayadurga, Devgad, Malvan, Vengurle, which were formerly the bases of the navy. After the abolition of the Maratha fleet at the close of the Peshva period of the Maratha history the *Gābīts* took to fishing, having lost their war-like occupation. (Vide Census of India, Vol. VII—Information supplied by Mr. K. V. Kubal).³

The investigation of the several problems connected with the foregoing jumbled mass of tradition, history, philology and the pride of pedigree is quite beyond the scope of the present paper. I would, therefore, combat only some definite statements made in the foregoing explanations, on the strength of documentary evidence.

It is said in the above information recorded in the *Jñāna-kośa* that “the word *GĀBĪT* is not the true word” but that it is a term used in

1. *Mahā. Jñāna-kośa*, Part XII, Co. 102.

2. *Ibid.*

3. See *Bombay Gazetteer*, under *Gabit*, a caste of Fishermen, in Ratnagiri District, X, 127, 155, 171; in Savantwadi State, X, 406, 415; in Kolaba District, XI, 68; in Kansa District, XV, pt. i, 305, in the Belgaum District, XXI, 156.

the Census reports. This statement is definitely wrong. The following documentary evidence shows that the term GĀBIT is three hundred years old, being used in definitely dated documents of A.D. 1633 and 1723. The oldest forms of this caste-name if they vary from the form GĀBIT current in A.D. 1633 will have to be proved by textual evidence. In A.D. 1723 also the form current was GĀBIT as I shall show below. I shall be happy to know any variations from this form recorded in early documents. ¹

1. Though such early documents (especially before A.D. 1600) are quite rare in the Maratha records there are good many of them in the *Peshwa Daftar* edited by Rao Bahadur G. S. Sardesai. Not only men of the *Gābit* caste were recruited in the Maratha navy but also men from other sea-faring castes were availed of. A study of these castes and their history is yet a desideratum in spite of the information about them recorded in the Gazetteers. Now that the Maratha Navy as such has ceased to exist it is worth while putting on record the nautical terminology that became current during the vigorous career of this Navy but some of which has now become obsolete. Though I cannot undertake such a study at present I shall record below as specimen a few naval terms used in the documents of the *Peshwa Daftar* to denote different kinds of ships and boats as also their equipment:—

- (1) गुराब— P.D. 40 (46) c. 1747 A.D.; P.D. 34 (9) 1737 (गुराबा); P.D. 34 (80) 1733; P.D. 34 (110) c. 1738 (reference to "दुर्बिन मली" or telescope used for naval reconnoitring); P.D. 34 (120) 1738; P.D. 33 (10) 1733; P.D. 33 (14 and 22) 1733;
- (2) सिबाब— P.D. 40 (45) 1747; P.D. 40 (63) 1750; P.D. 34 (80) 1737 (pl. सिबाबी); P.D. 33 (63) 1733 (सिबाबी);
- (3) नराबी— P.D. 40 (63) 1750; P.D. 34 (9) 1737 (नराबे); P.D. 33 (14) 1733; P.D. 33 (65) 1733;
- (4) महागिरी— P.D. 40 (63) 1750 (महागिन्या pl.); P.D. 34 (61) 1737; P.D. 33 (14) 1733 (माहेगिरी, माहगिरी); P.D. 33 (17) 1733; P.D. 33 (22) 1733 (माहेगिन्या); P.D. 33 (51) 1733 (माहगिरी); P.D. 33 (65) 1733 (माहागिना);
- (5) गलबने— P.D. 34 (9) 1737; P.D. 33 (10) 1733 and many times.
- (6) डोबी— P.D. 34 (31) 1737;
- (7) पदव्या— P.D. 34 (36) 1738; P.D. 34 (41) 1737; P.D. 34 (99) 1738; P.D. 34 (120) 1737;
- (8) कलेमारी— P.D. 34 (42) 1737; (9) कचो (= इच्छी अहाज); P.D. 34 (57) 1738;
- (10) करगने— P.D. 34 (61) 1737; P.D. 34 (99) 1738; P.D. 34 (120) 1738;
- (11) मचचे— P.D. 34 (80) 1737;
- (12) जहाज— P.D. 34 (81) 1737; P.D. 34 (146) 1739; P.D. 33 (63) 1733 (ज्याहाज); P.D. 33 (65) 1733 (जहाज);
- (13) शारबे— P.D. 34 (85) 1737;
- (14) वाल— P.D. 34 (120) 1738;
- (15) डोण्या— P.D. 34 (61) 1737 (पांचवे डोण्या). Men employed to work on these vessels were *Kolis*, *Bhandaris*, *Christians*, *Muhammedans* [P.D. 34 (61) 1737] as also *Arabs* [P.D. 34 (80) 1737]. The following references to allied terms may be found interest-

The other statement made in the information supplied by the Śabda-Kośa and Jñāna-Kośa referred to already is that the term became current in Shivaji's time. My evidence shows that this statement also is not true to history. The use of the word GĀBĪT in a document dated A. D. 1633, when Shivaji was three years old and hence too young to think of a navy or the allied question of employing Konkni Marathas on his gunboats (or Grābs¹ or Gurābs or Gurābs) definitely proves the fixity of the form Gābīt in the Marathi language not only in A. D. 1633 but much earlier. At any rate one cannot exploit Shivaji's navy, of which I am equally proud along with my fellow-countrymen, for explaining the term GĀBĪT. My evidence easily

ing:— "सफरी च्यार" (P. D. 34 (35) 1737); गाला = Small guns (दोन पंचरसी हातभर लांब व ब्रेक अडीच हात लांब); P. D. 34 (57) 1738; The Arab sometimes proved traitors (झारब होने रानाणी पाकड झेव् केला) P. D. 34 (80) 1737; Parts of equipment of a गलबत [P. D. 34 (94, 1737 - "गलबत अलाव, आवडण, अवजार महबतमान"]; दर्याबंदी, दालदी, पाटेल कुले [P. D. 34 (94) 1737; P. D. 33 (92) 1733]. The names "राम तखिल" and "समद तोंडेल" used in P. D. 33 (29) 1733 are quite typical of Hindu-Muslim Unity!

1. Vide article on GRĀB in *Hobson-Jobson* (1903) pp. 391-392. The term is now obsolete. Vide also *Bombay Gazetteer* xiii, pt. i, 348. The proper Arabic word for *Grāb* is *ghurāb*, adapted into Marathi and Konkani as *gurāb*. Chronological usages of the word:—

- (1) A. D. 1181 - "a *ghurāb* from Tripoli" (Arabic letter of Archbishop of Pisa etc.)
- (2) c. 1200 - "*Ghurab*" Cornix, *Corvus*, gales.
- (3) 1343 - "*Ghorāb*" (Ibn Bututs iv, 59).
- (4) 1505 - "*Gabra*" = "*gorāb*" (Vocabulary of Pedro de Alcalá).
- (5) 1554 - "*Ghurābs*" (nidi'Ali Kapudan in the narrative of his fight with Portuguese).
- (6) 1510 - "*Gourabe*" (*Pyrard de Laval* Hak. Soc. i, 312).
- (7) 1660 - "*Ghrāb*" (Muhammad M'asum, in *Elliot*, i, 250).
- (8) 1679 - "*Grab*" (*Hedges, Diary*, Hak. Soc. ii, Cl xxxiv).
- (9) 1690 - "*Ghorāb*" (Hyde, Note on Peristal, in *Syn. Dissert.* i, 97).
- (10) 1673 - "*Grab*" [Tryer, 153].
- (11) 1727 - "*Grabs of war*" (A. Hamilton, i, 250, ed. 1744, ii, 253).
- (12) 1753-52 - "*Goerab*".
- (13) 1754 - "*Grab*".
- (14) 1760 - "*Grab*".
- (15) 1763 - "*Grab*".
- (16) 1810 - "*Grab*".
- (17) 1820 - "*Ghorab*".
- (18) 1872 - "*Ghurab*" (Burton, *Sind Revisited*).

The *Mahārāṣṭra Śabdakośa*, Vol. III, p. 1006 records under "*Gurāb*" the following line from the *Mahābhārata* (in Marathi verse) by the celebrated Mahārāṣṭra poet Moropant (A. D. 1729 to 1794):—

"दर्याबंदी मंडवीच्या भवांसधुतील वा गुराबा ज्या।" (*Udyoga*, p. 13, 173).

The above usage of the word *gurāb* for purposes of poetical imagery shows the extent to which it had become naturalised in the Marathi language in spite of its Arabic origin.

pushes back the antiquity of the term to about A.D. 1550 allowing a period of about half a century for it to be naturalised in the country of its adoption, even supposing that the term GĀBĪT was derived¹ from a foreign word.

To come now to the usage of the term GĀBĪT recorded in documents. In a bundle of papers kindly lent to me for reference by the *Bharata Itihas Samshodhak Mandala*, Poona, and designated by them as *Salahi Daftar I* find the following document in which the term GĀBĪT is used no less than three times :—

No. 27 — This is a sale-deed dated *Salivahan Śaka 1555, Caitra Sud Pratipadā Brasaṭṭavār* corresponding to Thursday, 28th February 1633. It contains at the top a square seal in Persian as also three lines² in Persian covering a space 6 in × 1½ in. There is also a circular seal in the right-hand margin, in Persian characters. The document contains the names of about 15 witnesses. The parties to the document together with the witnesses had assembled at Dabhole³ (Dābhole grāme) where this duly attested document was drawn up. In this document the following usages of the word GĀBĪT are recorded :—

- (1) line 3 from the top—"Mokam GĀBĪT MUMRĪ tape Sālsī."
- (2) Name of a witness in the margin followed by his designation "mokādam GĀBĪT MUMRĪ."
- (3) name of witness No. 9 at the bottom recorded as follows :— "Mārte rāut bin Sekhu raut GĀBĪT MUMRĪ :—

1. The Marathi lexicons must record Chronological usages of the term GĀBĪT in the manner of Hobson-Jobson before an attempt is made by them to connect it with the word GRĀB and its phonetical variations. Perhaps the Portuguese records may throw some light on the derivation of the word GĀBĪT.

2. My friend Prof. B. D. Varma has kindly given me the following translation of these lines though he cannot read the content of the Seal as they are rather smeared with ink and hence illegible :—

"In the Court of the noble religious law it was recorded that on 20th Zil-qua deb *Shakar* year Salas.....wa..... Malik Mir Hussain Miranchi the former Mokasa holder of the village of Dābhole, tapā mentioned above, presented himself and said on oath and willingly and he acknowledged, as also the witnesses about the order given below in Hindawi language."

"*Hindawi*"—This term has been used in a grant dated A.D. 1299 made by Raja Bimba to Purushottampant Kavale ("Mutābik 1221 *Hindawi*") Vide *Appendix A* in the *History of Sakla Yajurvediya Brahmins* by N. V. Vaidya, Bombay, 1884.

3. This Dābhole is identical with village *Dābhole* shown in the Map (No. 47 H—Ratnagiri). It is about 2 miles from *Jamande* and 4 miles from *Devagad*. About 4 miles from Dabhole we find on the map a village called *Mithumbri*.

The word GĀBIT in all the three usages given above is always coupled with the word MUMRI, the exact meaning of which will have to be determined. Curiously enough the expression GĀBIT MUMRI current in A.D. 1633 was current in A.D. 1723 also as will be seen from the following letter of Kanhoji Angria, which uses the word GĀBIT coupled with the word MUMRI only once where it signifies the name of a place GĀBIT MUMRI in the vicinity of the village JAMSADE' (near Devagad). At three other places in the same letter

1. This *Gābit Mumri* near Jamsade ("गाबीत मुमरी जावसडे") appears to be connected with *Mīḥamumbri* (मीठ मुंबरी) shown on the Map at a distance of about 4 miles from Jamsade. In a document (आज्ञापत्र) kindly lent to me by Mr. Y. N. Kulkar and dated A.D. 1780 (गमानीच मया व अखक) from the Peshwa we find the following villages in order:— जावसडे, कुणकेश्वर, मीठमुंबरी, मीठबाव, इत्ये, दामोळे.

Rao Bahadur Bambardekar in a private communication dated 15th January 1938 writes to me that a friend of his, Mr. Kubal who belongs to *Gābit* caste was not aware that the term *Gābit* is as old as 1633 A.D. It appears from the old documents in the possession of Mr. Kubal that the term may have become current within the last 200 to 250 years or so. Mr. Kubal knows that a place of the name *Gābit Mumri* is situated near Devagad. "*Mumri*" is the name of the village. There is a river near this village. The other bank of this river has got the locality known as "*Mīḥ Mumri*" inhabited by people of the name "*Gdōḍe*" or "*Mīḥ Gdōḍe*". In Savantwadi State also there are people of the *Mīḥ Gdōḍe* name. These people manufacture salt.

I have no documentary evidence to prove the antiquity of the term "*Mīḥ Mumri*" prior to A.D. 1780.

The Salehi Daftar contains more than 20 documents which are sale-deeds of properties in favour of the ancestors of the Thakurs of Jamsade. The years of these documents and the names of the ancestors of the Thakurs mentioned in them are noted below:—

A.D.	A.D.
1633— Rām Thakur	1660— Sale-deed by Roghbat bin Gopalbhat Ransdiya (Ransde) in favour of Jan Thakur bin Rām Thakur—property of Narayan Thakur mentioned.
1640— Vitthal Thakur and Rām Thakur	1660— Jan Thakur
1645— Vitthal Thakur	1668— Vitthal Thakur bin Jan Thakur
1649— Jan Thakur	1669— Vitthal Thakur
1650— Janoba Thakur	1659— Jan Thakur
1651— Jan Thakur	1659— Do
1654— ...Do...	1670
1657— Do... <i>Saudagar</i>	1676 } Vital Thakur
1656— Do Do	1679 }
1656— Jan Thakur and Rām Thakur	1685— Vithoba Thakur
1657— Ant Thakur and Jan Thakur	
1659— Narayan Thakur <i>Mehddam</i>	
1659— Jan Thakur, Narayan Thakur	

There is also in this Daftar a letter of Kanoji Raje Prabhāvalkar (addressed to Narayan Thakur) with his seal and *moṣṭab*. The writer of this paper is a direct descendant of Naro Raysji Thakur who led the Mudgud expedition of 1748 A.D. against Tulaji Angria (Vide *Bombay University Journal* Vol. V, Part IV, pp. 31 to 54). The native village of Naro Raysji was Hadpid about 15 miles from Jamsade. The Thakurs of Jamsade and the Thakurs of Hadpid are identical as they have the same *gotra* (Kāṁyape), same *Subcaste* (Kārḥḍa Brahmins), same *Surnames* (Thakur) and same

the term GĀBIT caste occurs. As Kanhoji Angria's letter uses the word in two different contexts thereby distinguishing the meanings of the expression GĀBIT MUMRI and the term GĀBIT in one and the same letter I am reproducing it below from a copy¹ available to me:—

की

तालीक

(सीका माहे)

“अभयेपत्र राजकार्यपुरंदर विधासनिधि राजमान्ये राजकी कान्होजी आंगरे सरकेळ तांगा सीव हांगा माळवणकर हाजी या गाणीतमुमरी आमसडे घुवुर सन सत्तास बरातीन मया व अलफ. विषदे बमयपत्र येतीने. मुवा येऊन बजं केळा की कनीन साहेबाचे कीलवकन अजोरे देवगुर्गाण्या भासरीपाने मानसे व होदि दोनी बाणून वसाहिरप केडी माहे. होडीस र्वाबदी माहो वाकरिता साहेबी हुवाक होऊन र्वाबदी बाणकी बाणाकया कील सादर करितील तरी बाणन माळवणाहून गाणीत चीगापांचजन येऊन येईन म्हणोन बजं केळा त्याचरून तुजला हे अभयेपत्र सादर केले बसे तरी उमेद वरून गाणीत जे येतील ते येऊन येने. तुझे होबीच येऊसाळ महसूल माफ केळा बसे. गाणीत बाणलीक त्यास जलजल ज्वायकी होणार माही. ईश्वारास मरून बाणून होबी चालती होये तं करजे. बमये बसे छ १५ जीलकार ” (मोठंय माहे)

In the above letter Kanhoji Angria Sarkhel assures an applicant freedom from molestation to men of the GĀBIT caste whom the applicant intends to bring from Malvan with a view to man his two boats plying at sea under the protection of the fort of Janjira Devadurga. The applicant wanted to bring about 4/5 men of the GĀBIT caste who were evidently experts in manning the boats. Apparently

family deity (Mahālakṣmī). The sale deeds mentioned above enable us to reconstruct the genealogy of the Jamade Thakurs for three generations (from A.D. 1633 to 1685) viz. *Ram Thakur-Jan or Jambod Thakur-Vithal or Vithoba Thakur*. As Jan Thakur is called. "*Somdagar*" it appears he was a merchant carrying on trade in coconuts and allied products as all the properties purchased by the Thakurs are coconut gardens. Narayan Thakur (mohdām appear) to belong to a cousin line separated from the line of Ram Thakur, his son and grandson very early i. e. before A.D. 1600. Naro Raysaji Thakur possibly belonged to this line.

1. Copy kindly lent to me by Mr. Y. N. Kelkar of Poons from Otavkar Daftar with him. Another letter in this Daftar dated A.D. 1758 (समान क्षमसेन मया व अलफ) is a कौलनामा from Naro Tryambak (Soman) Peshwa's Subhedar of Janjira Vijayadurga addressed to बाबाजी सीव तालि मुमरकर requesting him to join service with his boats and assuring him freedom from molestation of any kind. After the destruction of Gulaji Angria's fleet in February 1756 by the joint expedition of the Peshwa and the English many of the sailors in the employ of the Angria had possibly run away through fear but were apparently eager to serve their new master the Peshwa ("तुवा र्वाबदीवाचे भास्तांगुले परागंदा होऊन मालवणास गेलास. हाजी वाववास उमेदवार आहेस"). The subhedar of the Peshwa assured the present sailor that he and his father would be re-employed in the Peshwa's fleet ("कौल सादर केला असे.....निघोन येवे माणस वाहोन सरबाय करून सेवा येऊन चालविले जाईल"). This sailor is called मुमरकर because he possibly was a resident of गाणीतमुमरी in the vicinity of मौमुरपरी near Jambhod.

Kanboji Angria as the Head of the Maratha navy exercised strict control over maritime shipping encouraging at the same time all legitimate efforts of seafarers. In the case of the present applicant he promises remission of the tax on his boat for one year by way of stimulus to his occupation. The expression "Hāli Vasti (॥) GĀBIT MUMRI, Jamsade" may mean "now stationed at GĀBIT MUMRI in the vicinity of Jamsade." This expression clarifies to a certain extent the meaning of the expression GĀBIT MUMRI used three times in the sale-deed of A.D. 1633. I am inclined to hold the view that the men of the Gābit caste resided in groups at different places on the coast. The places of their residence may have been termed "GĀBIT MUMRI" though the exact meaning of the word MUMRI I cannot make out at present.

The evidence recorded in the present paper from unpublished sources clearly proves the existence of the word GĀBIT prior to A.D. 1633 and I await more light on the problem of the antiquity and definite origin of this term¹ from interested men of this caste as also from philologists and historians.

1. Among Mahi Kantha State (See *Bom. Gaz.* V, 427) we find a state of the name *Gābit*. The Gazetteer states that the Chief of the State is a *Makvana Koli*. The *Makvans* is a special community of part foreign descent (*Bom. Gaz.* IX, pt. ii, p. 11). There are Hindu Converts from *Makvana* tribe of *Rajputs* or *Kolis*, *Sunoi* in faith (ibid pp. 65-66). Vide also Vols. IX, pt. i, 130; Vol. I, pt. i, 140; Vol. VIII, p. 115. An account of Mahi Kantha *Makvans* appears to *Bom. Gov. Sel.* XII, 18. From the phonetical similarity, of the Caste name *Gābit* with *Gābat* the name of the State mentioned above and the existence of the *Koli* ruler therein of the *Makvana* Community can we establish any historical connection between the *Gābit* Caste of fishermen on the Coast with the *Makvana Kolis* in Gujrat and Kathiawar? The point needs investigation.

Since this paper was written Rao Bahadur Bembardkar has drawn my attention to the heroic role played by a person of the *Gābit* Caste by name *Gagoji Tāpdel* in saving the life of the Maratha King Shivaji the Great. The incident occurred at *Bānde*, a village now included within the jurisdiction of the *Savantwadi* State and an account of it is given in the *Chitragupta Bakhar* (pp. 123-124) published by Mr. Sane in the *Kāyasthāna-Samgraha*.

Gagoji Tāpdel alias *Gagbā Tārel* originally belonged to the village *Bānde*. His descendants are still living at this place. He had five sons. A temple of the goddess "Bhāvai" the family deity of *Gagoji* still exists and is situated near the temple of *Bāndeshvar*, the presiding deity of *Bānde*. The original name of *Gagoji's* family was "*Desai*" as Mr. Kubal informs us. Some land belonging to *Gagoji* still belongs to his line. His descendants are still called *Desais*. *Gagoji's* occupation was to carry passengers across a river near *Bānde*. The way to *Goa* lay across this river. *Anant Shergvi*, the vakil of the Portuguese once carried 10000 troops across this river and *Gagoji* while he did this work of carrying the troops to the other bank of the river overheard the conversation of *Anant Shergvi*, which revealed a plot to attack *Shivaji* at midnight. *Gagoji* lost no time to give a report of the intended attack to *Shivaji Maharaj*. This timely warning of the treacherous attack put *Shivaji Maharaj* in an attitude of defence and he immediately made his troops take up a strategic position for attacking the enemy's troops. The enemy was vigorously attacked and completely routed as described in detail by the *Chitragupta Bakhar* referred to above. [Vide also p. 197 of the *Life of Shivaji* by *Krishnaji Arjun Kelukar*, 1930; pp. 121-122 of *Gomantak Shuddhichā Itihāsa* by *Shankar Dhondo Khirsagar*; pp. 9-10 of *Life of Gorind Janardan Borkar* alias *Shri Gajanan Suami Jyotishi*]. I am not aware if the incident about *Gagoji Tāpdel's* heroism as described in the *Chitragupta Bakhar* (Composed in about 1681 i. e. A.D. 1759) is corroborated by any contemporary or subsequent references in the Maratha records. It would be worth while to study the whole incident in all its aspects including an examination of the claim made by Mr. Kubal on the strength of traditional and other evidence that *Gagoji Tāpdel* belonged to *Gābit* Caste.

5. THE ANTIQUITY OF THE CASTE-NAME SENAVI *

The *Bombay Gazetteer*¹ describes the 'Sēnavis' as a caste of Brahmins in Gujarat, also called *Sārasvats*, said to have been shipwrecked strangers purified with fire by Parashurāma." It further states that the term 'Sēnavi' is a "name of doubtful meaning" (Vol. XVIII, pt. i, pp. 175-180) and that the *Sēnavis* also call themselves *Sārasvats* and *Gauḍa Brahmins*. The *Gazetteer*² also states that the origin of the name *Sēnavi* is disputed. According to one account it is "Shahānav" or ninety-six from the number of the families of the original settlers. A second account derives³ the name from *Send*, an army, because many *Sēnavis* were warriors.⁴ A third account derives it from "Shāhanbhog" which we are told is the Canarese term for village accountant. Of these three accounts the last seems to find favour with the well-informed. The *Sēnavis* had great influence at Scindia's court about 1797 A.D.⁵ The *Gazetteer* further states that the District of *Sēnavis* coincides with the Konkan.⁶ One of the special traits of the *Sēnavis* recorded by the *Gazetteer* is that they "eat fish and mutton" even though Brahmins. In the *Marathachronicle* called the *Sabhārad Bakhār*⁷

* *Journal of the University of Bombay*, Vol. V, pt. 6, pp. 152-155.

1. *Bombay Gazetteer* Vol. IX, pt. i, pp. 436, 438. Further information about *Sēnavis* in the different districts of the Bombay Presidency will be found in the following references:—*Ratnagiri* Dist. X, 116; Peculiarities in the dialect of *Sēnavis*, X, 116, note 6; *Savantvadi* State X, 411; *Kolaba* Dist. XI, 45, 46; *Thana* Dist. XIII, 85; *Nasik* Dist. XVI, 41; *Ahmednagar* Dist. XVII, 63, 64; *Poona* Dist. XVIII, pt. i, 175-180; *Satara* Dist. XIX, 56; *Sholapur* Dist. XX, 38-40; *Belgaum* Dist. XXI, 90-92; *Kolhapur* State, XXIV, 63; *Dharmar* Dist. XXII, 98; *Bijapur* Dist. XXIII, 89; *Kanara* Dist. XV, pt. i, 139, 168.

2. *Bombay Gazetteer*, Vol. XVIII, pt. i, p. 175—foot note 1.

3. The Prākṛta form for *Sendpati* is *Sendpai* (सेनापति) see *Prākṛta Grammar* by Pischel § 72 (line 7). This form has been used in the *Mṛcchakaṭika* (101, 21). I am indebted to Dr. V. S. Sukthankar for this reference. Sir R. G. Bhandarkar in his *Wilson Philological Lectures* (R. G. B. Works Vol. IV, p. 419) has the following entry regarding *Sēnavi*:—

"M. = *Marāṭhī* सेनापति or य name of a Caste, Pr. (Prākṛta) सेनापति Skr. (Sanskrit) सेनापति".

One राजाजी सेनापति was Sidi's Sardar who was killed in A.D. 1736 in the battle of Cherbat (see *Pahwa Daftar Selections*, No. 3 letter No. 192 dated 2nd May 1736).

4. *Ibid.*, Vol. XVIII, pt. ii, 276.

5. *Ibid.*, Vol. I, pt. ii, p. 10 (Introduction to the History of Konkan).

6. See *Siva Caritrapradīpa* (pub. by Bharata Itihasa Sans. Mandal, Poona, 1925) ed. by D. V. Apte and M. S. Divekar, p. 71. The date of composition of the *Sabhārad Bakhār* is Saka 1619 (= 1697 A.D.) see extract from this *Bakhār* on p. 128 of *Shivaji Sevanti*.

composed in A.D. 1697, *Pitambar Senavi*,¹ the administrator of the then chief of the Savantwadi state is styled as "मरुत्याहारी महामुख." This reference proves that the fish-eating habit was common with the *Senavis* in Shivaji's time and that the name "*Senavi*" was also then current. This reference, therefore, pushes back the antiquity of the name *Senavi* to about A.D. 1600.² The question may now be asked regarding the exact antiquity of the usage of the name *Senavi* and its variations. This question is difficult to answer successfully for want of records prior to Shivaji's time. I intend to record in this note the references I have been able to collect about the actual usage of the name *Senavi* and its phonetical variations.

Mr. Bhave³ in his History of Marathi Literature called the "*Mahārāṣṭra Sārasvat*" mentions certain works called '*Mestakas*' or 'systems of account' as explained by him in the same context. He calls it '*likhana-paddhati*' also. Hemādri, the author of the *Caturvarga Cintāmani*, was reputed to be the father of this *paddhati*. Subsequent writers modelled their *mestakas* on Hemādri's work. One Govind Kavi composed a work called "सेणवार्ह पद्धत" and Mr. Bhave states that the contents of this work are identical with the *mestakas* ascribed to Hemādri. We are concerned in this reference with the term "सेणवार्ह" which is a phonetic variation of the term "सेणवी" and the system may have been called "सेणवार्ह" probably because the *Senavis* had something to do with accounting as indicated by the name '*Shāhānbog*' which is a Canarese term for the village accountant as mentioned above.⁴ As the 'सेणवार्ह मेस्तक' of Govind Kavi is modelled

1. See *Shivaji Souvenir*, ed. by G. S. Sardesai, 3rd May, 1927, p. 128. In the biographical notices given on p. 184 of this book the following information about *Pitambar Senavi* is recorded:—He was the *Kārbhāri* of the Savant of Kudāl deputed to negotiate with Shivaji in A.D. 1659. In 1670 A.D., Shivaji captured Kolavaga and demanded the right of 'Cauthāi' from the Portuguese of Goa. In this connection Shivaji had appointed *Pitambar Senavi* but *Pitambar* died in 1678 A.D. before his mission was completed."

2. See document No. 41 (Sources of the History of Gomāntak published in *Itihāsa Samgraha* by Parasania) dated Śaka 1616 = A.D. 1694. The following *Senavis* are mentioned in this document:—

कुण सेणवी, नाब सेणवी, माग सेणवी, निठ सेणवी, रामहृग सेणवी, सोन सेणवी, मख सेणवी, वनंत सेणवी, महाबल सेणवी: Document No. 42 which is dated Śaka 1617 = A.D. 1695 contains the following names: गोरल सेणवी हाड, देवजी सेणवी, मुकुंद सेणवी कोसंबे, वनंत सेणवी, सुकटणकर, दीर सेणवी सुकटणकर, राम सेणवी निसा, रामाजी सेणवी बागडे and others.

3. *Mahārāṣṭra Sārasvata*. Poona, 1919, pp. 33-34.

4. S. S. Talmaki in his "*Sarasvat Families*," Part I, Bombay, 1935, makes the following remarks about the efficiency of these *Shanbhog*s:—

"If an independent testimony of the quality of work done by these *Shanbhog*s were required, we may quote here the words of Major Munro who carried on the work of Survey Settlement in Kanara. Writing in 1800 about the accounts kept by these *Shanbhog*s he says that they were in such a state of perfection and preservation as to furnish a complete abstract of land-rent during a period of more than 400 years."

after Hemādri's *mastakas* it must have been composed some time after A.D. 1270 about which time Hemādri wrote his *Caturvarga Cintāmaṇi*.¹

The meanings of the term 'Śeṇavī' not recorded by the *Bombay Gazetteer* are supplemented by Rao Bahadur S. S. Talmaki in his excellent monograph on the *Saraswat Families*. These are :—(1) The name *Śeṇavī* is derived from the word *Sṛani* in Northern India; (2) Its origin is also ascribed to *Sarman* or *Sarman Arya*; (3) It is derived from *Sahāṇa* which in the Konkani has the form '*Shano*' and means learned, and from which arose the forms '*Shane*' (plural of *Shano*) *Shanoi*, *Shenai* and *Shenoi*.² Mr. Talmaki states further that the term '*Shenai*' is used as an affix to names as a mark of respectability e.g., *Shama Shenai*, *Vinayak Shenai*, *Vithoba Shenai* and so on. According, to him *Shanbhog* in Kanarese has the same meaning as *Shenai* in Konkani and it may therefore be presumed that the former was derived from the latter. "The province of Goa had been under Kanarese rulers for about 1200 years and the word '*Shanavai*' assumed that shape during their régime and may have been carried thence to other regions governed by them outside Goa."

It is not the purpose of this note to hold a brief for any of the forms of the term '*Śeṇavī*' recorded above but to record data which might prove useful for the solution of the problem.

It appears from the inscriptional evidence recorded below that the term 'सेणवै' was current in the 13th century in Mahārāṣṭra. Mr. K. A. Padhye of Bombay has reproduced at the end of his *Life of Hemādri*³ a stone inscription in the temple of God Viṭhobā of Pandharpur which bears dates Śaka 1195 to 1198, i.e. A.D. 1273-76. This inscription records numerous names of donors who donated some money for the construction of a part of the temple buildings. Among the names of these donors the following names are found :—

Page 36—" मां बोलिबाबा सेणवै "

Page 38—" सालिचें यादो सेणवै द् "

Page 40—" बाँबळे ग १ मुद्रस्त सेणवै "

Page 42—" बामरसा सेणवै जादेद् "

Page 46—" लाड हरिदेवें "

In the first four entries recorded above the affix 'सेणवै' has been added to the personal name and this use is analogous to that pointed out by Mr. Talmaki as in the names '*Shama Shenai*', '*Vinayak Shenai*' etc., where the term '*Shenai*' is used as a mark of respectability. It seems probable that in the 13th century the term सेणवै may have

1. P. V. Kane : *History of Dharmadāstra* Vol. I. p. 354.

2. *Saraswat Families*, Part I, Bombay, 1935, pp. 19-20.

3. *Hemādri Caritra* by K. A. Padhye (in Marathi) Bombay 1931.

been used as a caste-name than as a mark of respectability. It appears to me that it may have been used exactly in the same sense in which the term *सैनवी* is used at present as a caste-name. The fifth entry from the inscription quoted above, contains the surname "सरा" which is now current among the *Senavis*.

In view of the inscriptional evidence recorded above the antiquity of the term *सैनवी* has been amply proved and though its exact genesis is yet a matter for investigation we may expect even earlier usages¹ of this term with or without variations of form in inscriptions or elsewhere.



1. One such earlier usage is supplied to me by Rao Bahadur Wasudeva Anant Bambardekar of Bandra in a private communication dated 21-1-1937. In the *Kalaji* Copperplate grant of Saka 1113 (= A.D. 1191) we find the endorsement "सिनीतं सैनवी हरिदेवे" [*Vide* Proceedings of the Bharata Itihasa Mandal for Saka 1835 (= A.D. 1913), p. 220]. Rao Bahadur Bambardekar thinks that the term "सैनवी" in the above endorsement denotes *vocation* and not *caste*.

6. THE TESTIMONIALS OF GOOD CONDUCT TO WARREN HASTINGS BY THE BENARES PANDITS—A.D. 1796*

In the *Testimonials*¹ of the British and Native Inhabitants of India relative to the character and conduct of Warren Hastings published in 1797 A.D. we find some very interesting testimonials from the Inhabitants of Benares. In the history of mankind occasions, when a Viceroy needs a testimonial from his humble subjects, are few and far between. Rarer still are the occasions when such testimonials find place in official archives or private publications. The writer of the *Preface* of the big volume containing the testimonials referred to above hopes "that when the destined hour of his (of Warren Hastings) corporeal extinction arrives, he shall not wholly die; but still in the hearts of many, and his name be transmitted with respect to generations yet unborn, through the protecting care of those, who stood forth to do it honour while its possessor was living." Verily the generations that were born since 1796 have come up to the expectations expressed in the foregoing remarks in the matter of keeping alive the memory of Warren Hastings and his celebrated trial.

Addresses of congratulation were sent by the principal inhabitants of the city of Benares to Mr. Hastings through the Government of Bengal with a letter from their Secretary dated 19th December 1796. Of these addresses one was in *Persian* and the other two were in *Sanskrit*. Mr. Wilkins² rendered the Sanskrit addresses into English and these English translations have been published on pages 755-768 of the *Debates of the House of Lords* (1797, London) referred to above.

The first of these two *Sanskrit* addresses ends with the following endorsement:—

"This writing is dated the 7th of the light fortnight of the moon of Phalgunna, in the year 1852 of the Samvat."³

The address contains the seals and signatures of the following persons:—

(1) *Kasi-natha*, Professor of general knowledge. (Seal) ornament of logic and among Panditas called the chief of Science.

* Journal of the Tanjore S. M. Library, Vol. II, No. 1 pp. 10-14.

1. *Debates of the House of Lords on the Evidence delivered in the trial of Warren Hastings Esquire; Proceedings of the East India Company in consequence of an acquittal; and Testimonials of the British and Native Inhabitants of India, Relative to his character and conduct while he was Governor General of Fort William, in Bengal, London, MDCC, XCVII, pp. 826.*

2. Vide p. 745 of *Debates* etc. where Mr. Wilkins is called "very learned and ingenious friend" of Mr. Hastings.

3. = A.D. 1796.

- (2) *Rama-chandra* Sarma surnamed Tara.
 (3) *Vidya-nanda* Sarma surnamed Bhatta.
 (4) *Ganga rama* Sarma. (5) *Seena prasada* Sarma.
 (6) *Anoopa-narayana* Deva Sarma. (7) *Salagrama* Treepatbee.
 (8) *Reeshee-raja* Meesra. (9) *Deeksheeta* Haree-rama Sarma.
 (10) *Sooka-deva*, Astronomer (11) Manoo-jee Josee
 (12) *Deeksheeta* Doorlabha-jee (13) Rama-prasada Sarma.
 (14) *Lakshmee-patee*, Astronomer
 (15) *Kasee-natha*, Treepathee (16) Krishnanand Sarma
 (17) *Soodha-kara* Sarma surnamed Tarā
 (18) *Dhana-patee* Sarma (19) Mano-ratha Sarma
 (20) *Kevala-rama* Sarma
 (21) *Soodha-kara* Sarma, *Surnamed* Tara
 (22) *Kevala-rama* Meesra
 (23) *Deeksheeta* Jata Sankara, Professor of the Rik-veda
 (24) *Sookla-markandayeezwara*, Professor of the Sama-veda
 (25) *Krishna-deeksheeta* Deva Sarma (26) *Haree-deva* Sarma
 (27) *Doorga-charna* Sarma (28) *Heera-manee* *Surnamed* Sessa
 (29) *Jaya-rama* Sarma, *Surnamed* Bhat-vada
 (30) *Gowree-prasada* Sarma
 (31) }
 (32) } four names in the Malabar character not known
 (33) }
 (34) }
 (35) *Jayarama* Bhattha, Professor of the Yajurveda
 (36) *Mownee-raja*, Professor of the Atharvaveda
 (37) *Bhyrava-chandra* Sarma (38) *Ramananda* Sarma
 (39) *Rameswara-bhattha* Gahwara (40) *Goveenda-bhattha*
 (41) *Manee* Sarma (42) *Babanoo* Sarma (43) *Cheta* Sarma

Almost all the signatories to the above-mentioned address in Sanskrit appear to be Brahmin Pandits of Benares. This number includes a professor of General Knowledge (No. 1), a professor of Rgveda (No. 23), a professor of Samaveda (No. 24), a professor of Yajurveda (No. 35), a professor of Atharvaveda (No. 36) and an Astronomer (No. 10). What designations the other Pandits had we are unable to say. They were apparently some of the principal inhabitants of the Hindu Brahmin community of Benares.

The second address in *Sanskrit* is "Dated, Friday the seventh of the light fortnight of the month of Visakha in the year 1853 of the Samvat." It begins as under :— "We, a number of your industrious Servants, Brahmans, and other Hindoos, Yavanas (Mussalmans) and other foreigners, whose constant residence is here on the delightful, beautiful, and for ever full-flowing stream; where, by conquering

sundry evils, we are become pure, and where we enjoy at ease abundant happiness flowing from the profits derived from our several exertions, humbly address you, the illustrious Navoh Amaduddowla, Governor Hastings Bahadur Jaladat Jang."

This address was originally intended for persons, Hindu and Mussalman, but no Mussalman signatures were attached to it as the Mussalmans had "subscribed a separate address for themselves." Some of the Hindu signatories have endorsed their signatures embodied in verses or prose passages, translations of which have been published in the volume under reference. We reproduce here a specimen passage in verse :—

(Page 767)—"May the good wishes, abundantly offered up by Sree Neevasa Pathak, the son of the astrologer Paramananda affect him.

By the pleasure of Veeswa Natha, may treasures of good wishes be the prize of victory to the Hastings,

Sovereign of the land of truth !"

The signatories of the above address are the following :—

- (1) Haree Bhadra Pandeeta
- (2) Veeswambhara Seeva Bhadra
- (3) Rama Bhadra Pandeeta
- (4) Rama-chandra, surnamed *Kotakara*
- (5) Dadam Bhattha Sarma, surnamed *Bhatta*
- (6) Sessa Haree Rama Panta
- (7) Neela Kanta Sarma, surnamed *Rajeem Bhatta*
- (8) Haree Rama Sarma
- (9) *Poonya Stambha Mookoonda*
- (10) Seeva Rama, called *Dasa Pootra*
- (11) Venee Agra Rama *Dasa Pootra*
- (12) Raja Rama Sarma Surnamed *Jathee*
- (13) *Vasoo deva Goorjaras*
- (14) *Mookoonda Deva*
- (15) *Lakshmana Pandeeta, Surnamed Dasa Pootra*
- (16) *Lakshmana Sarma, Surnamed Bandhava-kara*
- (17) *Jagannatha Sarma*
- (18) *Veeswa Roopa Nathoo Bhattha*
- (19) *Kripa Krishna Sarma Surnamed Yajneeka*
- (20) *Bacham Bhattha Sarma, Surnamed Mownee*
- (21) *Astrologer Jaya Rama*
- (22) *Nanha Surnamed Goorjara*
- (23) *Vaksha Yadava*
- (24) *Toondha Raja Deeksheeta*
- (25) *Bhairava Deeksheeta, Surnamed Palaneekara*
- (26) *Narayana Bhattha, Surnamed Powraneeka*
- (27) *Cheenta Monee, Surnamed Kaarlakar*
- (28) *Rama Krishna Napata*
- (29) *Bhairava Bhattha, Surnamed Ghoola*
- (30) *Bala Krishna Deeksheeta, Surnamed Ayacheeta*
- (31) *Sakharam Bhattha, Surnamed Laghatya*

- (32) Seeva Rama Bhattha, Surnamed *Katree*
 (33) Ganga Rama Bhattha, Surnamed *Moghes* (34) Yajneswara
 (35) Rama Krishna Deeksheeta, Surnamed *Teelaka*
 (36) Jagannath (37) Sada Seeva Sarma, Surnamed *Ambhonahara*
 (38) Rama Chandra Pant Sarma
 (39) Raja Rama Surnamed *Ardha Mana*
 (40) Valam Bhattha, of the race of Bharadwaja
 (41) Veeswaroopa, Surnamed *Dhoondee*
 (42) Krishna Bhattha (43) Anta Rama Surnamed *Patavardhan*
 (44) Bala Mookoonda
 (45) Bhawnee Sankara Sarma Surnamed *Thakoora*
 (46) Treepatee Janakee Natha Sarma (47) Seeva Lal
 (48) Rama Krishna, Surnamed *Ghoola* (49) Loka Natha Deva
 (50) Jagannath Bhattha *Marathee* (51) Krishna Bhattha *Lalla*
 (52) Okabalaha Sarma (53) Sakha Rama, Surnamed *Tara*
 (54) Mancee Rama, Surnamed *Maha Janee*, son of the astronomer
 Rameswar
 (55) Cheentamancee *Deeksheeta*, Surnamed *Karnataka*
 (56) Doodhee Raja Bhattha, Surnamed *Pharaka*
 (57) Jagannath, Surnamed *Ghoola*
 (58) Bapoo Deeksheeta, Surnamed *Drona*
 (59) Rama Chandra *Deva*
 (60) Bhaskara Bhattha, Surnamed *Laghata*
 (61) Sree Neevasa *Pathaka*, the son of the astrologer Paramananda
 (62) Maba Deva *Deva* (63) Seeva Bhadra *Pathaka*
 (64) Seeva Rama *Ghose* (65) Adeetya Rama *Pataka*
 (66) *Vyasa* Vinayaka
 (67) Radha Charana of the court of justice established in the city
 of Varanasee (Benares).

"The remaining signatures, between ninety and a hundred containing nothing but mere names, are here omitted."

We have reproduced the names of the signatories to the two Sanskrit addresses to Warren Hastings without any changes in their spellings. These names are very important to the students of history, in general and of the history¹ of the city of Benares in particular, if any such comes to be written in a thoroughly scientific manner re-

1. Dr. A. S. Altekar has already attempted an outline of such a history, which I am sure he will enlarge in the years to come. (Vide *Journal of the Benares Hindu University*, Vol. I—pp. 47 to 76 deal with *Pre-historic Period*, pp. 57-75 deal with the period from C. 1000 to C. 1200 A.D., pp. 743 to 255 deal with the period of *Muslim Rule 1194 to 1707 A.D.*, pp. 256-270 deal with the *Modern Period*, 1767 to 1917 A.D. British rule was established in Benares in 1794. In 1796 the British decided to transfer the Nawab of Audh Nazir Ali, from Benares to Calcutta. On 14th January 1797 Mr. Cherry the British Resident was assassinated by Nazir Ali, whose insurrection was put down by the English and he was sent as a prisoner to Vellore.

ording every reference to Benares and its contribution to Indian Culture and Religion through centuries. From times immemorial Benares has been a meeting place of Pandits from all provinces of India and a glance at the surnames recorded in the above lists of signatories will show that these signatories hailed from different parts of India. The families represented by some of them had possibly made Benares their permanent residence.

The addresses presented to Warren Hastings remind me of similar addresses presented to Kavindrācārya by contemporary Benares scholars during the reign of the Mughal Emperor Shah Jehan (A.D. 1628 to A.D. 1658). The pilgrim tax at Benares was abolished by Shah Jehan at the request of Kavindrācārya.¹ It was a day of rejoicing for the Hindus and congratulations poured in from all quarters. Titles of *Kavindra Vidyānidhi* and *Ācārya* were conferred on this Sanyasin who was originally an inhabitant of the Mahārāṣṭra but who became the head of the Pandits of Benares on account of his piety and learning. A perusal of the *Kavindra-Candrodaya* will convince any one of the spontaneous feelings of admiration and gratitude which prompted the authors of the addresses presented to Kavindrācārya but how far the addresses presented to Warren Hastings are a genuine expression of the feelings of their signatories I am unable to say as in such types of addresses the hand of the officialdom is often at work sometimes suppressing the likes and dislikes of the people, whose voice they are supposed to represent.

1. Vide my paper on "Bernier and Kavindrācārya Sarasvatī at the Mughal Court" in *Annals* (S. V. Ori. Institute, Tirupati) Vol. I pt. 4 pp. 1 to 16. I have tried to identify the "the Chief of Benares Pandits" (mentioned by Bernier in his *Travels*) with Kavindrācārya Sarasvatī, to whom addresses were presented by the Benares Pandits. These addresses are preserved in the *Kavindra-candrodaya* edited by H. D. Sharma and M. M. Patkar Poona, 1939). In the above paper I have recorded the names of the 69 authors of these addresses some of whom may have been the ancestors of the signatories to the addresses given to Warren Hastings which contain many Decadal Surnames such as (1) लाली, (2) ज्ञेय, (3) मटवाचिकर, (4) कोटकर, (5) भट, (6) पुणताचिकर, (7) बलपुत्रे, (8) मधे, (9) गुर्जर, (10) वरुनीकर, (11) पुराणिक, (12) कर्लेकर, (13) पुणे, (14) लघाटे, (15) कात्रे, (16) लोचे, (17) टिळक, (18) अंबोणकर, (19) अदमणे, (20) पटवर्धन, (21) ठाकर, (22) मराठे, (23) महाजन, (24) कर्नाटक (की?), (25) द्रोंग, (26) देश, (27) वाठक, (28) वास्ति इ. etc. These surnames pertain mostly to the Mahārāṣṭra Deshastha Brahmins but a few pertain to the Karahade and Konknanatha or Chitpavan Brahmins as well.

7. GLIMPSES INTO THE ECONOMIC, INDUSTRIAL AND SOCIAL LIFE OF BENGAL AS GIVEN BY A MAHARĀṢṬRA BRAHMIN OF THE SEVENTEENTH CENTURY*

In 1938 my friend Prof. N. B. Roy published his article on 'Glimpses into the History of Bengal'—(the fourteenth and early fifteenth century) in the *Sardesai Commemoration Volume* (pp. 153-160). In this article Prof. Roy observes: 'The medieval history of Bengal is shrouded in utter obscurity'. He then records the remarks of Ibn Batuta, the African traveller, about Bengal. Batuta mentions the flourishing agriculture of Bengal and the cheap prices of the necessities of life, not to say the abundance of rice for which Bengal was then famous as it is today. 'The smiling villages and gardens of Bengal', enchanted the traveller, who incorporated into his account a list of the current cheap prices of the necessities of life which include fowls, milch cow, pigeons, ram, piece of cotton of finest quality measuring 30 cubits, a beautiful girl (for one gold dinara), rice, paddy, syrup, sugar, sesame oil, ghee, etc. This plenty and prosperity of Bengal was, however, counterbalanced by the severity of its climate so that men of Khorasan called Bengal 'a hell crammed with blessings' (*dozak pur najmut*).¹

From Batuta's account of Bengal of c. A.D. 1330 we are led by Prof. Roy to the account of a Chinese, Mahaun,² an interpreter attached to a Chinese embassy that visited Bengal about 1406 A.D. Mahaun brings to light for the first time the dress, manufactures, chief products and amusements of the Bengali people. I note below some items from Mahaun's account:—

- (1) Bengal, an extensive country, with abundant products and population.
- (2) Flourishing trade, commercial intercourse with foreign nations.

* *Indian Culture*, XII, pp. 47-56.

1. Cf. *Indian Companion* (by G. H. Khandekar, Poona, 1894), pp. 66-67—*Bengal Presidency*.—*Minerals*: coal, iron, salt. *Products*: 'Luxuriance of vegetation in Bengal is not surpassed, perhaps in any part of the world.'—may be called 'one enormous garden.'—rice, wheat, other grains, poppies, indigo, tea, jute, cotton, sugar-cane, mulberry, tobacco, hemp, flax—oilseeds, ginger, chillies, other excellent vegetables—mangoes, oranges, limes, plantains and other fruits in profusion—beautiful flowers and gorgeous flowering trees and shrubs grow without care—timber from Sundarbans and base of the Himalayas. *Manufactures*: silk production, cultivation of date tree, date-sugar, saltpetre,—indigo, tea, silk, sugar and saltpetre are important manufactures—in every village there are carpenters, blacksmiths, goldsmiths, potters, and oil-sellers. *Exports*: opium, rice, wheat and other food grains, oil-seeds, sugar, tea, saltpetre and hides,—trade with England, France and China.

2. *Sardesai Comm.* Vol. pp. 159-160.

- (3) *People* were Muhammadans with dark skin—some light complexioned persons were also seen.
- (4) *Costume*—Shaved heads and white turbans, long loose robe with a broad coloured handkerchief round waist.
- (5) *Manufactures*.—Fine cotton fabrics of many varieties,—six varieties described—silk industry—handkerchiefs, caps embroidered with gold, painted ware, basins, cups, steel, guns, knives and scissors, paper-manufacture from the bark of a tree.
- (6) *Corn and fruits*.—Abundance of rice, wheat, sesamum, all kinds of pulse, millet, ginger, mustard, onions, hemp, quash, brinjals, and many kinds of vegetables.
Fruits.—Plantains, jack fruits, mangoes, pomegranates, sugar-cane, white sugar, granulated sugar, various candied and preserved fruits. Betel nut was offered to the guests.
- (7) *Amusements*.—Feasts and entertainments, music and dance—conjurers—display of man fighting with tiger given in the streets.
- (8) *Character*.—People were open and straightforward in their dealings.

Let us now see how this affluence of Bengal continued to enchant not only foreigners but even people from other provinces of India. In this connection I record below a very detailed picture of Bengal incidentally recorded in a Sanskrit grammatical work composed between A.D. 1690 and 1710 or so. This work is called the *Gīroāga-padamāñjarī*¹ by Dhunḍirāja, son of Śrīraṅgabhaṭṭa. This author appears to have been a Mahārāṣṭra Brahmin of Madhva sect. He composed this work at Benares. The work is a Sanskrit conversational grammar in which the subject of conversation is the daily life of a Benares Brahmin from morn till eve. This Brahmin invites a Sannyāsin for dinner. The guest is assured that his host is a Mahārāṣṭra Brahmin by caste (*jñātī*). He is further informed that the host was born in *Gauḍadeśa*, i.e. Bengal. His father also was born in Bengal. The education of both the father and son took place in Bengal. After a sumptuous dinner the Sannyāsin inquired why his host stayed in Bengal for long. The host replied that his stay in Bengal was with a view to study *Tarka* (logic) in which his father was proficient. His own study, however, was not as deep as his father's. Nevertheless he had studied

1. There are three MSS. of this work in the Govt. MSS. Library, at the B. O. R. Institute, Poona. This work refers to the Siege of Gingee (A.D. 1690-1698) by Zulfiqārkhān, the son of Asadkhān as an event of fresh occurrence (vide my paper on *An Echo of the Siege of Jinji in a Sanskrit Grammatical Work*, etc., contributed to the Madras Session of the Indian History Congress, 1944). According to my evidence Dhunḍirāja, the author of the work, flourished between A.D. 1650 and 1710 or so.

Pañcaprakaraṅas, Cintāmaṇi, Siromaṇi, Mathurānāthī, and other works. The guest observed that the Brahmins of Bengal were *Vedabhīya* (excluded from the study of the *Vedas*). The host replied that the statement was correct as these Brahmins are guided in their conduct by the authority of the *Smṛti*. The guest questioned if it was a fact that the Brahmins in Bengal were fish-eaters. The host confirmed the statement and observed that it was a *durācāra* or evil custom. Then followed a long discussion on the evil customs of different provinces like the Deccan, Āndhra, Karnāṭaka, Draviḍa, Kerala, Konkaṇa, Gurjara, North India, Gauḍa deśa, Kānyakubja, Utkala, Parvata, Maithīla, Māgadhā, Candrāvati, and Kashmir. About the Kashmir Brahmins the host observed that they were practically *Yavanas* and that there was no limit to their *durācāras* (''काश्मीरदेशीया द्विजः केवलं यवनभायाः सन्तु तेषां दुराचाराणां गणना नैवास्ति''). According to him only the *Mahārāṣṭra* Brahmins were free from *durācāras* and even among them those belonging to *Mādhva* sect were completely free from evil customs. The guest then inquired about the number of *tīrthas* or holy places in Bengal. The host mentioned the following *tīrthas* :—

(1) *Gaṅgāsāgaratīrtha*¹; (2) *Kumārīkā Kṣetra* with *Kumārīkā* goddess, (3) *Brahmaputra*, (4) *Kūmarūpeśvara* with *Kāmāṅgī* goddess and many other holy places and temples.

The Sannyāsin inquired if any other special things are produced in Bengal. The host replied as follows :—

Folios 13-18 of MS. No. 21 of 1919-1924 :—

''पृथ्वस्त्राणि बहुमीहयानि तत्र भवन्ति । क्षीरीदुक्तसंज्ञानि दुकूलानि समीचीना ज्ञाप्ये । जन्मानपि रेशमसंभवानि समीचीनानि बहुविधित्राणि भवन्ति । स्वामिनः रेशमोक्षपतिः पृथिव्यास्तत्रैव ज्ञायते । अन्यानि तुलजाणि वस्त्राणि अति सुहृमानि भवन्ति ।''

तथा सर्वाणि धान्यानि तत्र भवन्ति । ग्रीहयो भवन्ति । गोधूमाः भवन्ति यथाः भ०
षण्ढाः भव० भावपयो द्विजातीनि भवन्ति । माषाः द्विजातीयाः भवन्ति । मुद्गाः । मसूराः ।
रावमाषाः । कुलिरथाः । लंकाः तिळाः । द्विजातीयाः० । खट्वाः भवन्ति । त्रिव्यंघवाः० पुण्यः०
जीवाराः० इयामाकाः० मंडवः० सपंपाः त्रिविधाः भवन्ति । पृथुकः अतिसमीचीनो ज्ञायते । सः
कथं ।

पृथुकाः किरतनुहृपीनस्तस्त्रीकरकमलैरुपजीतः ।

पयसाः शर्करया² समुपेतः कर्पति कश्य जनस्य न चेतः ।

1. *Jinaprabhāsūri* refers to ''योगासगरतटव'' in his *विविधतीर्थकल्प* (p. 92 of. वि. ती. कल्प ed. by Jinavijaya, 1934). *Jinaprabha* was a contemporary of *Betuts*, the African traveller.

2. Vide *Hobson Jobson* (1903), p. 85—article on *Bengal—A.D. 1498—'Penguin* :— in this kingdom are many Moors, and few Christians and the King is a Moor in this land are many cotton cloths, and silk cloths and much silver; it is 40 days with fair wind from Calicut''—(*Roteiro de V. de Gama*, 2nd ed., p. 110).

3. Vide *Hobson Jobson*, p. 863 (*sugar*)—'In the reign of *Taitung* (627-650) a man was sent to Gangetic India to learn the art of sugar-making'.

वृक्षाः विपदकस्तत्रैव भवति। शार्करा इति सोमना जायते। सितापि भवति। गुणो भवति। दुग्धं सनीवीर्षं वाचते। दधि भवति। क्रीदो भवति। पूनं अतिसनीवीर्षं वर्तते। तैलानि बहुविधानि भवन्ति। शिकतैर्षं। सपैपतैर्षं। अतसीतैर्षं। पेरंबतैर्षं। कुमुंबतैर्षं वाचते। वाचापि वाचि सुगंधतेजानि भवन्ति। नानाविधानि सुगंधं अर्कानि भवन्ति। बहुविधाः शाखाः भवन्ति। बहुविधा वृक्षाः संति। माज्जवृक्षाः पनसवृक्षाः वर्तते। नारकेकतरवः। क्युकाः। बहुविधाः कपचीतरवश्च संति। बद्रीवृक्षाः। जंबूकलतरवः। दादिनीवृक्षाः। कर्बवृक्षाः। बकुलमूकुराः समित। पारियाततरवः। शंभुकवृक्षाः त्रिविधाः संति। बहुविधा निवृतरवः संति। पिपुसंवृक्षाः संति। नागरगण्डुमा भवते। शीताफलशास्त्रिनः। कपिशवृक्षाः। केवकीगुल्माः संति। धमीवृक्षाः। चार्त्रावृक्षाः। त्रितिगीतरवः। कर्बद्वगुल्माः वर्तते। भूपलशगुल्माः तिष्ठति। रोचवाफतरवः संति। शंबदनवृक्षाः। रक्तचंदनतरवः। शुष्काम्बलतरवः। कृष्णागुलतरवः। म्याप्रोच- वृक्षाः संति। मन्वायवृक्षाः। भीतुंबरवृक्षाः वर्तते। शास्त्रमीतीतरवः। कंचनवृक्षाः संति। विष- वृक्षाः संति। मधुकवृक्षाः। मसोक्तवृक्षाः। कर्भतरवः। तमालतरवः। तालवृक्षाः। शाकवृक्षाः। शाकपञ्चवृक्षाः। सारकतरवः। पुंभागवृक्षाः। अर्जुनवृक्षाः संति। बद्रीवृक्षाः। द्विविधा केवूरवृक्षा विद्यते। चवकादिरवकूरवृक्षाः पराशतरवः। विभीतकवृक्षाः। मल्लालकवृक्षाः। मूर्जतरवः। अमयावृक्षाः संति। कीचकाः विद्यते। चेतसाः संति। करंजवृक्षाः। गुग्गुलवृक्षाः। वर्धकुपुलसहस्रंदाः संति। चारवृक्षाः। अगस्त्यवृक्षाः। ब्रह्मतरवः। चचनागततरवः।

वनस्पतयः बहुविधाः संति। अपामार्गगुल्माः। नागकेदारं जायते। मृंगराजगुणं। हृदीगुल्माः भवन्ति। अर्कंशपूरगुल्मा द्विविधानि भवन्ति। सुपुंड्रं तुलसी वर्धते। माही। मुंदी। दूर्वा द्विविधानि भवन्ति। अथराजितासि। पुनर्नवा वर्तते। विजया गुल्माः। कर्दी। वाचस्पति विद्यते।

अथ लताविशेषः। माथीलता। मालती। बाकासपल्ली। मारीचलताः। पिप्पलीलताः। गुफली। नागदमरुता। गुंजाळता। नागवल्ली। सेवंतिका गुल्माः। वासंतिका। कंपपुष्पाणि। असनकुमुमानि। अंदारपुष्पाणि। ज्ञातीकुमुमानि। मल्लिकापुष्पाणि। मल्लिका सुमना विद्यते। शंभुकुमुष्पाणि। सिद्धरकुमुमानि। माथीकुमुमानि। तुदसीगुल्माः भवन्ति। दमनगुल्माः मह- गुल्माः भवन्ति। हृक्षपो भवन्ति। अथस्मारैक्षपो भवन्ति। कुशा विद्यते। कासाः विद्यते। सराः विद्यते। जेनपूर्वा विद्यते। विष्णुकोताप्युग्मसि। अतोप्यवृक्षाः वनस्पतिविशेषा बह्वस्तिष्ठति।

पूर्वसमुद्रोस्ति। भागीरथी वर्तते। अग्न्यानि बहुविधानि सरासि विद्यन्ते। पुष्करिण्यः संति। ताम्बु बहुविधानि सरोवराणि भवन्ति। शतपत्राणि संति। इंहीवरानि भवन्ति कुमुदानि बहुविधानि जायन्ते। तत्र बहुविधाः पक्षिजातयः संति। नीरपतत्रिणः संति। इंसाः विद्यते। कंकाः विद्यते। वायसाः विद्यते। पिकाः विद्यते। मयूराः संति। चातकाः संति। चक्रवाकाः संति। लंबेनाः संति। झुकाः विद्यते। सारिकाः विद्यते। चकोराः संति। जलकुमुदानि विद्यन्ते। कोबद्वयः संति। द्वायवृक्षाः संति। कारंबद्वयः संति। गृष्णाः संति। वाचाः संति। पिंगकाः संति। हरीताः संति। मृंगराजाः संति। परावृतः संति। सारसाः संति। बड्डका विद्यन्ते। वागुरण्यः संति। टिटिमाः संति।

तथा बहुविधानि श्वापदानि विद्यन्ते। श्वाप्रः संति। वनमहिषाः संति। वृकाः जंबूकाः मोमण्यः। कर्गवृक्षा वर्तते। शूनाः संति। चर्मवयः संति। मयजूकाः संति। मंड्याः संति। चामः संति। दृगिण्यं संति।

संति। धाम्यपराशः। गायः संति। महिष्यः संति। भजाः संति। पृथकाः संति। मेधाः संति। शूद्राः संति। गजाः संति। अथाः संति। श्लेचराणि संति। रासभाः संति। माजौराः संति। सुप्रकाः संति। नकुकाः संति। सपाः विद्यन्ते। मेकाः संति। पुष्पुर्ष्वर्षिस्तुति। कुरटाः संति। प्रथः संति। वृद्धिकाः विद्यन्ते। मसिकाः संति। मसाकाः संति। मङ्कुया विद्यन्ते। सुभ्राः संति। पर्वगाः संति। भ्रमराः संति। विपीलिकाः संति। अतोप्यग्ये बहुविधाः जंतवस्तुति।

अथ जलजंतवः। बहुविधा मरुयाः संति। शफर्यः संति। कुर्माः विद्यन्ते। मकाः संति। सवाः संति। जलवृद्धिकाः संति। जलकर्मटाः विद्यन्ते। जलकाः संति। जल-सुप्रकाः संति। जलमनुष्याः संति। एभ्यो बहु जलजंतवस्तुति।

अथ जलोद्भवः। बहवः संति। नौधारिणः बहुकुसला विद्यन्ते। कैवर्तकाः बहवः संति। श्लेषकस्तुति। बहवो वर्तन्ते। बहुविधाः जनाः वर्तन्ते। बाह्यणाः वर्तन्ते। शत्रिवाः संति। वैष्णवाः संति। शूद्राः संति। गुर्जराः वर्तन्ते। आंध्रास्तः। कर्णाटकाः वर्तन्ते। द्विचिदाः वर्तन्ते। मौर्यास्तुति। चिकुपाचनाः संति। पानपावाः संति। मार्यदिनाः संति। जीनाः संति। कान्यकुब्जाः संति। सारस्वताः संति। माथुरा वर्तन्ते। पाञ्चात्या वर्तन्ते। मरुजाः वर्तन्ते। मागधीयाः संति। मैथिलाः संति। पार्वतीयाः संति। त्रिभुतजाः संति। गौडानां देशे पृथः ४-उटकला वर्तन्ते। कारीच्याः वर्तन्ते। गयापाठकाः संति। प्रयागपाठकास्तत्र वर्तन्ते। गंगोमुत्राः तत्र भायच्छन्ति। अन्ये नीचजातीयाः^२ तत्र वर्तन्ते। नाथिकाः संति। रजकाः संति। कुलाका वर्तन्ते। शिदिनः संति। शिन्कारिगः तिष्ठति। जंतुपाठाः वर्तन्ते। स्वर्णशिदिनः। अथ शदिनः। शदिनस्तुति। पटुकाराः संति। मागयाः संति। अन्ये पण्यजीवो बहवस्तुति। यचनाः संति। चाढाकाः वर्तन्ते। बंसफोटकाः वर्तन्ते। शीचराः वर्तन्ते। वनेचराः संति। ग्याथाः संति। कुमुभोपजीविनः।

जटिलाः वर्तन्ते। तापसा संति। वैरागिनः संति। वैरवोपाठ (स ?) काः संति। मटाः संति। नतकाः संति। कुलटाः वर्तन्ते। वैज्योपवीविनः संति। श्यवसायिनो बहवस्तुति। पथिकाः बहवो वर्तन्ते। वैद्याः संति। ज्योतिर्विदः संति। माथिकाः संति। एवंविधाः सर्व-जातीयजनास्तत्र वर्तन्ति। स्वामिनः शूरि किं वचतस्वं पृथिव्यां ये विविधाः पदार्थां वर्तन्ते ते सर्वे तत्र विद्यन्ते। एवं वा। तर्हि अतिसमीचीनो देशस्तुति। तर्हि एकवारं मया गंतव्यं तत्र शक्यसावदे शानं विचार्य अमे बुद्धोपसमस्य वर्तन्ते कृत्वा गंतव्यं। चातुर्मास्यं विचार्य गमिष्यामि। सर्वे स्वामिनः गंतव्यं। स्वामिनः सर्वे इष्टव्यं। सवतु।”

1. Vide *Hobson-Jobson*, p. 86 (Bengal)—A.D. 1516—Barbosa States:—“..... the kingdom of Bengala the seaports are inhabited by Moors and Gentiles, amongst whom there is much trade and much shipping to many parts, because this sea is a gulf.”

Vide p. 144 of *Early History of Bengal*, by P. L. Paul, Calcutta, 1939, remarks on Nazy:—Bengal is a country of big rivers—mercantile navy indispensable—evidence of Fa-hien, Y-tsan Chwang about regular intercourse with far eastern countries—in every Pala grant the royal fleet is mentioned—Gauda people called “समुद्रीभवाये” in the Harsha inscription of the Maukhari king Ilaanavarman (A.D. 560)—the story of colonization of Ceylon by Prince Vijaya of Vauga.

2. This has reference to नाथिकाः (barbers), रजकाः (washermen), etc. It is a social irony that these useful professions should be considered as हीन-शिल्प from great antiquity.

• श्यः योद्धानां हेतुः may mean Muhammadans or foreigners in general like the English, Dutch, Portuguese, etc., who are mentioned by Bernier as settlers in Bengal in the middle of the seventeenth century.

The foregoing picture of the flora and fauna of Bengal as also its composite society consisting of settlers from other parts of India is very important because we rarely meet with such detailed descriptions of our provinces in Indian sources. Generally we are required to depend on the testimony of foreign observers in reconstructing the history of our Indian provinces. In the above description of Bengal of the seventeenth century we find that *Mahārājyas* and *Cittapāvanas*¹ are mentioned as residents of Bengal. The term '*Mahārājya*' is possibly used here to denote the *Deśastha* Brahmins. It is curious to note that even *Cittapāvanas* had gone to Bengal and resided there in the seventeenth century according to Dhunḍirāja's testimony. In this connection, I may note here that a *Cittapāvana* from Konkon (Śrīgārpur) in the Sangameshwar Taluka of the Ratnagiri district of the Bombay Presidency hearing of the Tantric attainments of a *Siddha* of Rāḍhā in Bengal went there and served the *Siddha* as his pupil. This *Cittapāvana* was called *Sivayogī*. He attained *siddhi*, returned to Śrīgārpur in Konkon and there founded a Maṭh as will be seen from the following extracts from *Poems pertaining to the Maratha King Sambhājī*, published by me in the *Annals* (B. O. R. Institute), Vol. XIX (1938), (pp. 58-60).

- “ शिवयोगी नाम कश्चिद् बाळपण्डितपाकम् ।
निवृत्तस्य सिद्धस्य चरितं वरदादमुत्तम् ॥ ३३ ॥
शिराया कौक्यकं देवं तं देवं समुपस्थितः ।
गुरुदेवात्तु तं सिद्धं वरपामास सुमतः ॥ ३४ ॥ ”
- “ विद्योत्तमद्विषयाः परिचरिततयाः याचयन्मन्त्रजातं
पद्मश्लोकानि बाबावराचरचरितः पर्वटमूर्धपर्यन्तः ।
देव्या शृंगारपुर्यां चरचरच मदीं कौक्ये मूरुदेसे
वसुं योगी जसिद्धस्तदमुत्तमं सखिवासं चकार ॥ ”

The description of Rāḍhā in Bengal, the town of residence of the guru of शिवयोगी is described as follows in the above poems :—

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वचरत्नां पुष्पतमा राधा नाम महापुरी ।
बाबावरोचपाठिनी बाबासुखिसयाग्रहा ॥ १ ॥
कनेकदीर्घमिथिता महापुष्पकजयदेः ।
इंसाकारोद्यानकीर्णैककवाकीरकोमितेः ॥ २ ॥
इंसेः वरमईसेष बाळकेश्यैः समापृता ।
गणेशैरमिथिता सिद्धस्याग्रयुगादिभिः ॥ ४ ॥
गतपक्षा गतकोषजनयं वक्ष्यामुरा ।

1. The references to *Cittapāvanas* and *Mahārājyas* in Gauda data are found in the three MSS. of the *Grotopadmaṭī* at the B. O. R. Institute, viz.—(1) No. 248 of 1892-93 (folio 12), (2) No. 13 of 1898-99 (fol. 12), and (3) No. 21 of 1919-24 (fol. 16).

कुम्भीमिः परिवृता शानापुष्पकसाकुम्भा ॥ ५ ॥

सुमनामक्षिकाशानिज्जपार्षपकपाटकेः ।

करबीरासोऽकडुंश्चणिकारस्वर्षुकेः ॥ ६ ॥

पुनागकेलपीसिटीचकुकेभूमिर्षपवैः ।

सेर्षतिकार्कत्रकजसरोमैः कंडुकेरपि ॥ ७ ॥

भाऊराज्जालकैमिबो मियुकेर्वज्जुकेरपि ।

कडुंश्चणिकारिष्य वटाशर्याकुंनैरपि ॥ ८ ॥

करकेवंद्रीवृन्दैः करीरैश्चारपीलुकेः ।

वपुकेवंदुमै रकचंदुमैः हृष्टचंदुमैः ॥ ९ ॥

शानस्वचैरनेकेष्व वनस्पतिगजेरपि ।

पलाशैर्नग्यकृतिकाकडुकेकेकेरैरठं ॥ १० ॥

वर्षति मियुयातीरे बंदुयाज्जपीविते ।

तस्या महासिद्धिचरः सर्वसिद्धजन्मिषः ॥ ११ ॥

The above description of the town of Rādhā' in Bengal belongs to the seventeenth century as the *Cittapāvan* Śivayogi was associated with the reign of King Sambhaji, son of Shivaji. Another feature of the description is that it is recorded by a Mahārāṣṭra Brahmin like Dhunḍirāja, the author of the *Gīrvāṇapadamañjarī*.

With a view to test the factual character of Dhunḍirāja's account of Bengal of the seventeenth century I note below some items from Bernier's glowing account of 'the fertility, wealth and beauty of the Kingdom of Bengale' as recorded in his *Travels* (1656-1668 A.D.) pages 437-446 (Constable, 1871) :—

- (1) 'Pre-eminence ascribed to Egypt is rather due to Bengal.'
- (2) Bengal *rice* produced in abundance and sent to remote States by sea and land.—Sent to Ceylon, Maldives also.
- (3) Bengal *sugar* produced in abundance and sent to Golkonda, Karnatic, Arabia, Mesopotamia, Persia.
- (4) Bengal *sweetmeats* produced in places inhabited by the Portuguese, who are skilful in preparing them.
- (5) *Fruits*.—Large *citrons* preserved—a certain delicate root about the length of sarsaparilla—*Ambā*, *anasas*, *myrabalans*, *limes* and ginger.
- (6) B. yields not so much *wheat* as Egypt—rice used normally—cheap *sea-biscuits*, supplied to European, English, Dutch and Portuguese ships.

1. Vide p. 164 of *Geographical Dictionary* by Nandalal Dey, 1927—article on *Rādhā*—that part of Bengal which lies to the west of the Ganges including Tamuk, Midnapur, and the districts of Hughli and Burdwan. In the *Mahābhagavata* tantra the temples of Tārakesvara and Siddhjintha are mentioned to be situated in *Rādhā*.

- (7) *Food of common people*— $3/4$ sorts of vegetables with rice and butter, purchased for the mearest tribe.
- (8) *Non-vegetarian diet*.—Fowls (20 or more for one rupee), geese, ducks, goats, sheep, pigs, fish of every species,—abundance of the necessaries of life is the cause of foreign settlements in Bengal by *Portuguese, Half-castes, Christians* (about 35,000).
- (9) *Women*.—"The rich exuberance of the country, together with the beauty and amiable disposition of the native women has given rise to a proverb in common use among the *Portuguese, English, and Dutch* that the Kingdom of Bengale has a hundred gates open for entrance but not one for departure."
- (10) *Commerce*.—Variety of commodities—sugar a valuable commodity—Bengal, a common storehouse of cotton and silks—cotton cloths, fine, coarse, white and coloured, which are exported by *Hollanders* alone to Japan and Europe—silk stuffs also exported—B. supplies all these stuffs to the Mogul Empire as far as Lahore and Kabul and to foreign nations—silks, not so fine as those of *Persia, Syria, Sayd and Barut* but are of much lower price.—The silk factory of the Dutch at *Kassem-Basar* (700-800 natives employed)—English and other merchants employ a proportionate number.—Bengal, principal emporium of *Saltpetre*—Dutch and English export it to *Indies and Europe*.—B. produces best *lac, opium, wax, civet, long pepper* and various drugs.—Butter in plenty exported.
- (11) *Climate*.—Seldom salubrious—great mortality.
- (12) *Geography*.—Endless number of channels to the sea—merchandise conveyed by water—towns and villages on the banks of these channels thickly populated with *Gentiles*—*Fields*, extensive, produce *rice, sugar, corn, 3/4 sorts of *vegetables, mustard, sesame oil, mulberry trees* (food for silkworms)—*ISLANDS*, extremely fertile, produce *fruit trees* and *pine-apple*—long walks arched with trees—danger of pirates—antelopes, hogs, wild fowls, tigers, a great danger—lunar rainbows—*Bernier* feels more happy than ancients who according to *Aristotle* had observed no *lunar rainbows*—storms and down pour of rain experienced by *Bernier* in his nine days' voyage in the *islands and channels*.*

I shall now give a summary of the description of Bengal in Sanskrit as recorded in Dhundirāja's work :—

- (1) Bengal produces :—
- (i) Costly *वस्त्राणि* (fine or coloured cloths).
 - (ii) *सूक्ष्माणि* (very fine silk garments or garments in general).

- (iii) coloured रेशम (silk) fabrics—रेशम is produced in Bengal alone.
- (iv) Cotton fabrics of a very fine variety (बतिसूतपाणि).

(2) Bengal produces *corn* of all varieties :—

Rice, wheat, राब (barley), चणक (gram), चावकी (a kind of pulse) of two varieties, मध (beans) of two varieties, मुत्र (kidney beans), मसुरा (lentil or pulse); राजमाष (a variety) of besas, कुलिया same as कुलया a kind of pulse), डंका (a kind of grain), तिक (sesamum) of two varieties, सवना (possibly सवना-सति or सली) sediment of oil or oil-cakes, शिबंगवा: (long pepper or saffron—*Apte's Dictionary*), पन्ना: नीवार (wild rice), स्वादाक (a kind of grain or corn), मंडक: (= मंडक ? a kind of baked flour), सरप (mustard) of three varieties, दूधक (= पोदे in Marathi) parched and flattened rice of the finest type—when mixed with milk and sugar and served with the lotus-like hands of a young woman is sure to be inviting to every man.

This type of flattened rice is available only in Bengal. Beautiful, white sugar and molasses are produced in Bengal, as also good milk, curds, honey (शौध), ghee of good quality. Among oils mention should be made of sesamum oil, mustard oil, linseed oil, castor oil, कुसुमतेक (safflower or saffron oil), and all varieties of scented oils (सुगंधतेकपाणि) and essences (सुगंध-मकीलि).

- (3) Bengal produces all types of Sākhās (= साका, *i. e.* vegetables or herbs) and many varieties of trees like mango tree, jack-fruit tree, cocconut tree, betel-nut tree, plantain tree (many varieties), jujube trees, the rose-apple trees, pomegranate tree, Kadamba trees, Bakula trees, Pārijāta trees, Campaka trees (three varieties), lime trees (many varieties), Picumanda (= Nimba—*Apte's Dict.*) trees, thickets of orange trees, Stāphala¹ (= stāphala = the custard-apple) trees, the wood-apple (*Kapittha*) trees, thickets of *Ketaki* plants, *Sami* trees, Dhātri (= *Amalaka*) trees, tamarind trees, thickets of *Karvanda* plants, thickets of *bhū-palata* plants, pine trees, sandal trees, red sandal trees, white *agaru* (*agallochum*) trees,

1. Saint Rāmadāsa of Mahārāṣṭra (died 1682 A.D.) mentions *Stāphala* plants in his *Bagāprakāṣaya*. In the *Hobson-Jobson* (Yule and Burnell, 1903), p. 284 we are told that the custard apple was introduced from South America and spread over India during the 16th century. The reference to *Custard-apple*, on p. 66 of Blochmann's *trans. of the Ain-i-Akbari* (A.D. 1590) is doubtful as the original text contains the word *saddphal* (*fructus-perensis*). The *Hobson-Jobson* records references to this fruit from foreign sources dated A.D. 1672, 1690 (Ovington—They (Hindus) feed likewise upon pine-apples, custard-apples, etc.), 1830 and 1878. Ovington's reference to Custard-apple corroborates Rāmadāsa's reference to शीताफल referred to above. Indian scholars ought to study the history of Indian plants from Indian sources.

black *agaru* trees, banyan trees, *afattha* (holy fig) trees, *andumbara* trees, *idmali* (silk cotton) trees, *Kāncana* trees, *Bilva* trees, *Madhuka* trees, *Atoka* trees, *Karmara* (= *Karmāra* = bamboo) trees, *Tamāla* trees, *Tāla* (palmyra) trees, *Sāla* trees, *Sāla-phala* trees, *Sarala* (turpentine) trees, *Painḍga* (nutmeg or *nāgakelara*) trees, *Arjuna* trees, *Kedūra* trees (two varieties), *Dhava Khadira* (*Acacia catechu*), *Bakūra* trees, *Palāia* trees, *Vibhītaka* trees (*Terminalia Balerica*), *Bhallātaka* (marking-nut) trees, birch-trees, *Abhayā* (= *Haritaki*) trees, bamboo trees, *Cetasa* (= ? *Vetasa* = cane) plants, *Karañja* trees, *Guggula* (fragrant gum) trees, *Valañju* trees, *Saptaccada* trees, *Cāra* trees, *Agasti* trees, *Plakya* trees, *Bacandga* trees.

- (4) Bengal produces many forest-plants such as *Apdmārga* (*Achyranthes Aspera*) thickets, *Nāgakelara* (*Mesua Roxburghii*) plants, *Bhṛngarāja* grass, thickets of *Bhṛṅgi* or the egg-plants, thickets of *Arka* (sun-plant) and *Dhattura* (white thorn-apple) of two varieties, *Mucukundā Tulast*, *Barbari* (= *Barbura* ? = Marathi बरबुर), *Brāhmi*, *Muṅḍi* (= *Muṅḍā* or *Muṅḍīrīkḥ*), *Dūrov* (panic grass) of two varieties, *Aparājītā*, *Punarnavā*, thickets of *Vijayā* (hemp), *Rudanti* and *Vācaspañ*.
- (5) Bengal produces *Creepers* like *Mādhvi* (= *Mādhaot*, *Mālati* (kind of jasmine), *Ākḍlavalli* (*Amaravel*, a parasitical plant), *Mārica*, *Pippal* (long pepper), *Gudaci* (= *Gudāci* = *Cocculus Cordifolius*), *Nāgadama*, *Guñjā*, *Nāgavalli* (piper betel), clusters of *Sovantikā*, *Vāsantikā*, *Kaṇḍapuspāpi* (flowers of bulbous plants), *Asana* flowers, *Maṇḍāra* (coral tree) flowers, *Yāñ* (jasmine) flowers, *Mālikā* (a kind of jasmine) flowers, *Bandhāka* flowers, *Sindūra* flowers, *Māci* flowers, clusters of *Tulast*, *Damana* (= *Damanaka*), *Maru*, Sugar-cane (*Iñju*), *Apaśmāra-ikṣu*, *Kuśa* (sacred grass), *Kāśa* (grass), *Sara* (a kind of white reed or grass), white *Dūrov* grass, *Vijñu Krāntā* grass.

Many more forest-plants besides those mentioned above exist in Bengal.

- (6) Bengal possesses the *Eastern Ocean* and the river *Bhāgīrathī*, besides many lakes and pools, full of lotuses, like the blue lotuses and varieties of red lotuses.
- (7) Bengal possesses many kinds of *Birds* such as aquatic birds (or otters), swans, herons, crows, cuckoos, peacocks, *cātakā* birds, *cahravāka* birds, *Khañjana* or wag-tails, Parrots, *sāvīkā* birds, *Cakra* (= Greek partridge), birds, water-fowls, lap-wings (or white cranes), gallinules (or water-crows), *Kārapā* (duck) birds, vultures, *cāpāñ* (blue jay), *Piñgalāñ*

(small owls), *Haritah* (kind of pigeons), *Bhrīgarśjah* (large bees), *Pārśortah* (= *Pārśortah* = pigeons), *Sārasāh* (cranes or swans), owls, *Vāguravyah* (wild fowls?), *Tisidha* birds.

- (8) Bengal possesses many kinds of *wild-beasts* such as tigers, wild buffaloes, wolves, jackals, *gomāyavah* (jackals), *Khad-gamyāh* (rhinoceros), deer, *Carmayavah*, bears, monkeys, dogs, *mygipah* (= ? antelopes).
- (9) Bengal possesses *domesticated animals* like cows, buffaloes, goats, wild goats, sheep, camels, elephants, horses, mules, asses, cats, rats, mongooses, snakes, frogs, musk-rats, chameleons, house-lizards, scorpions, flies, mosquitoes, bugs, bees or wasps, moths (or locusts or grass-hoppers), black-bees, ants.

Besides these Bengal possesses many other varieties of creatures.

- (10) Among the numerous *aquatic animals* of Bengal mention may be made of varieties of fish, small glittering fish, tortoises, crocodiles, water-snakes, prawns, water-crabs, leeches, water-rats, and mermen (*jalamanuṣyāh*)
- (11) Bengal possesses *boats* of different types in plenty. The sailors of Bengal are expert in the art of navigation. There are numerous fishermen as also numerous men engaged in shipping industry in Bengal.
- (12) The *population* of Bengal is of varied type, consisting of *Brahmins*, *Kṣatriyas*, *Vaiṣyas*, *Sūdras*. There are in Bengal *Gurjaras* (Gujaratis), *Āndhras*, *Karṇāṭakas*, *Draviḍas*, *Mahārāṣṭras*, *Cittapāvanas*, *Kānapāvas*, *Mādhyandīnas*, *Jainas*, *Kānyakubjas*, *Sārasvatas*, *Māthuras*, *Pāicātyas* (Westerners), *Marujas* (people from Marwar), *Māgadhyas* (from Bihar), *Maithilas* (from Mithilā), *Pārvaṭīyas* (people from the hills = hill tribes?), *Trihūtajas* (from Tirhut)—all these reside in *Gauḍadeśa*. There are also in Bengal people from *Utkala*, *Kāfi*. Guardians of *Gayā* and *Prayāga* (*Gayāpālakas* and *Prayāgapālakas*) go there, as also *Gaṅgāputras* (Brahmins who conduct pilgrims to the Ganges). There are people of *inferior caste* in Bengal like the barbers, washermen, potters, artisans, painters, *jantupālas* (= ? tantuvāyas = weavers), gold-smiths, iron-smiths, merchants, *Paṭukāras* (= *Paṭokari* in Marathi), *Māgadhas* (bards or panegyrist), and many other people who live by trading. There are also in Bengal the *Yavanas* (Muhammadans or foreigners), *Cāṇḍālas*, *Vamśa-Sphoṭakas* (= Bamboo workers?), fishermen, woodmen, hunters, flower-sellers,

There are also in Bengal ascetics with matted hair, hermits, ascetics who have subdued all their passions and desires and those who are devotees of god Bhairava, besides the the actors and dancers, women of profligate character (*Kulaśūbh*), persons living on the earnings of the prostitutes. There are many business men, rich men, physicians, astrologers, conjurers.—In this manner there are people of all kinds in Bengal.

In short, whatever things on this earth are considered excellent are all found in Bengal.

On hearing this description of Bengal the *Sannyāsin* observed that it was a fine country and further expressed his desire to visit it once. The host requested the *Sannyāsin* to do so and then to take his bath at the *Gaṅgāsāgara* (i.e. the place where the Ganges enters the ocean). Later he should visit God *Puruṣottama* and see all things for himself.

The foregoing description of Bengal of the seventeenth century is quite a Gazetteer description of Bengal textiles, agricultural products, forest produce, flora and fauna in detail, geography, zoology, shipping and navigation, population of varied sort including foreign settlers, aristocracy, merchants and people of all professions, high or low. This description is more specific than the description of Bengal by Batuta (fourteenth century), by Mahaun (early fifteenth century) and by Bernier (A.D. 1656-1667). For want of space I cannot enter into the details of the description which my Bengali friends will be better able to verify than myself. I shall feel happy if any of my readers would point out any such description of Bengal from Indian sources, Sanskrit or vernacular, prior to A.D. 1700. To the students of the history of Mahrāṣṭra the migration of *Mahārāṣṭra* Brahmins, *Sārasvata* Brahmins and *Cittapāvana* Brahmins to Bengal for educational or other purposes would be of special interest especially because this migration pertains to the seventeenth century. Benares was the abode of many *Sārasvatas*, *Mahārāṣṭras*, and *Cittapāvanas* between A.D. 1550 and 1700 but the evidence recorded in this paper shows that some of them had further migrated to *Gauḍadeśa* or Bengal. My friend Mr. N. G. Chapekar who has made a special study of the history of the *Cittapāvana* Brahmins informs me under date 17-10-1944 that he has no material to prove the migration of any *Cittapāvana* to Bengal. In view of this statement he would be interested in Dhundirāja's reference to *Cittapāvanas* in the *Gauḍadeśa* population and the migration of the *Cittapāvana* *Sivayogī* from Konkona to the town of *Rādhā* for Tāntric study during the reign of Chatrapati Sambhāji (A.D. 1680-1689). I await further light on this *Cittapāvana* migration to Bengal from the students of the Maratha and Bengal history.

1. Dr. D. C. Genguly in his very scholarly article on *Vaṅḍā Deśa* [*Ind. Hist Quarterly*, XIX (Dec. 1941), pp. 297-317] examines (1) *Brahmanical and Buddhist sources*, (2) *Chinese sources*, (3) *Muslim sources* and (4) *European sources* on Bengal. The first of these sources consists of a Cola Inscription of A.D. 1025 and the *Nālandā Inscription* of the first half of the twelfth century A.D. These inscriptions, however, give no detailed description of Bengal. Originally Bengal was split up into divisions like *śūb*, *raḍā*, *paḍā*, *śakṣat*, etc.

8. SOME PROVINCIAL SOCIAL CUSTOMS AND
MANNERS MENTIONED AS DURĀCARAS
BY VARADARĀJA (A PUPIL OF BHATTOJI
DIKṢITA) — (C. A. D. 1600-1660)*

Varadarāja¹, a pupil of Bhaṭṭoji Dikṣita lived between A.D. 1600 and 1660. In his work called the *Gīrvāṅgapadaśamanjari*, which is a sort of conversational grammar for Sanskrit, there is a discourse on the *durācārās* or evil practices current in the different provinces of India. The text of this discourse as found in MS 395 of 1899-1915 of this work in the Govt. MSS Library at the B. O. B. Institute, Poona, reads as follows:—

Folio 14—Here there is a dialogue after dinner between a *Brahmin*² and his *Sannyāsi* guest³.

The *Sannyāsi* asks his host:—

“भवता देवो रजस्वलापकीर्णः ब्राह्मणेः मुञ्चते किं सायं वा ।”

The host replies:— “स्वामिनः न मुञ्चते समीचीनैः”

Sannyāsi :— “तर्हि असमीचीनैः मुञ्चते वा”

Host :— “अर्हति । मत्प्रामाणिकेन । इल्लवाहकैः स्वस्वकारकोर्णः मुञ्चते”

Sannyāsi :— “तैः सह संघर्षो वर्तते न वा सत्यं द्रव्येण । यदि मिथ्या वदथ भवतां परलोको नश्यति ।”

Host :— “स्वामिनः । कस्मिन्देशे एवं चेत् । दुराचाराः न संति सर्वत्र दुराचाराः संशयेन । तथाहि ।

D (1) दक्षिणदेशे कळी मातुलकम्पाचरणं दुराचारः

D (2) वासिणात्येषु वर्षचतुष्टयायां कम्पायाः विवाहः दुराचारः ।

D (3) आन्ध्रदेशे इल्लवाहं दुराचारः ।

D (4) कर्नाटके देशे स्नानं पिना मोक्षनं दुराचारः ।

(5) माहाराष्ट्रे उच्छिष्टभक्षणं ज्येष्ठं परिपश्य कलिहस्त्य विषाहकर्यं कपित्थीकपंचसाह दुराचारः ।

D (6) द्विविहकोरुद्रदेशयोः सर्वेषां कुप्यदर्शनं दुराचारः ।

* *Bhāratya Vidyā*, VI, pp. 27-30.

1. Vide my paper on Varadarāja in *Festschrift P. V. Kane*, pp. 188-199.

2. The name of this Brahmin as introduced in the work on folio 3 is “अजयि पुण्य-
कण्ठपुरादेर गवहथ न्वाजपेदी.” In the subsequent portion of the text he is briefly reported as वाजपेयी from काण्ठपुरादेर मन्थदेशे (fol. 12).

3. He is represented as belonging to विधानगरं (fol. 4) as a householder (“अस्याकं
पुत्राभ्ये विधानगरं”). He gives a long list of the wealth of Vidyānagara (= Vijayanagar)
its economic and other products, its flora, its lakes and rivers, its holy places (*śrīhaṭ*)
etc.

4. D indicates that this *durācāra* has been mentioned by Dhruvārjya in his
वर्षाणिर्णयनसूत्रे, a later work.

- D (7) केरकलेसे उपरिसुरतं दुराचारः ।
 D (8) कौकले हकारोद्वं दुराचारः ।
 D (9) सुकीरसे च मेदि वपानं सुतीचदिने रकवकावपानं च दुराचारः ।
 D (10) उत्तरदेशे क्वी मांसमक्षणं दुराचारः ।
 D (11) पूर्वदेशे क्विचक्री देवरेण सुतोपसिपुराचारः ।
 D (12) मैथिलमीडदेशे सदा ठेककेपनं दुराचारः ।
 D (13) गौडदेशे देवरागो दुराचारः ।
 D (14) कान्यकुब्जदेशे पन्ध्रद्वयकमक्षणं विवाहादी मौडवकले परस्परस्पर्धनं दुराचारः ।
 (15) उत्कले सुभं सुभं सुरतं दुराचारः ।
 D (16) गौडप्राचिनकेरकउत्कलेषु पक्कमनंतद्वकोद्वनोद्वं दुराचारः ।
 D (17) सर्वेषां देशे पवि तावृकमक्षणं दुराचारः ।
 Guest (*sanyāsī*)— “अति सनीचीलं जातं । अतः परं मया महे गंतव्यमनुद्वान्कलो जातः ।”

The above dialogue between a *vaṅśepī* of Kānyakubja and a *Sanyāsī* who formerly belonged to Vidyānagara (Vijayanagar), though introduced for providing some theme for conversation in Sanskrit, possesses some historical and cultural interest. It may, therefore, be rendered into English¹ as follows :—

(*Vaṅśepī* = V and *Sanyāsī* = S)

S—Is it a fact that in your country (or province) viz. Kānyakubja in Madhyadeśa the Brahmins eat rice cooked by women in menses ?

V—Sir, good persons don't eat it.

S—May I take it that bad persons eat it ?

1. This is possibly a misreading for “सुभे” Cf. *Mahābhārata* Bombay Edition, 3. 108. 41 (= B. O. R. I. Critical Edition 3.186.35)

—“बहुवशा इत्येवैः शीलाचारविचिताः ।
 सुभेमगाः शिवो राध्मन्विद्यन्ति युगच्छने ॥”

Mādhava explains :—

“सुभे मगाः शिवो वशेषु प्रसिद्धाः । प्रथमं सुभेनेषं मण्डनं कृत्वा पुस्तकममुरीष्यन्त्यः । अत्यन्तं रताभ्यस्तात् ॥”

(Vide p. 169 of *Sukhenkar Memorial Edition*, Vol. I, 1944).

2. In giving this English rendering I may have missed the exact significance of the original text at certain places owing to my ignorance of the social life of the different provinces of India as it existed in the 17th century or as it exists today. It would be useful to collect data regarding the practices recorded by *Vaṅśarāja* from other contemporary sources.

- V—Rice cooked by women in menses is eaten by *dharshajis* (? people, by dishonest people and by ploughmen.
- S—Do women in menses keep (sexual) contact with these people? Please tell me the truth. If you tell me a falsehood you will not get heaven.
- V—Sir, what country is free from such practices? The evil customs are found everywhere, for instance—
- (1) In the Southern country the practice of marrying a maternal uncle's daughter¹ as it prevails in the Kali age may be considered an evil practice (*durācāra*).
 - (2) Among the *Southerners* the practice of getting one's daughter married before she had completed her fourth year² is an evil practice.
 - (3) In the *Āndhradeśa* or the country of Āndhras *hala-vaham*³ (the practice of carrying a plough) is current. It is an evil practice.
 - (4) The practice of taking one's meals without a bath current in the *Karpātaka* country is an evil practice.
 - (5) In the *Mahārāṣṭra* the following practices are current :—
 - (i) Eating the leavings of another man's food.
 - (ii) Celebrating the marriage of a younger member of the family before that of the elder one on the ground of practical convenience.
- These are, however, improper practices.

1. Vide p. 459 of Kane (*Hist. of Dh. II*). "Marriage with one's maternal uncle's daughter or paternal aunt's daughter was in vogue in the south (below the Narbadā probably) long before the *Baudhīyana Dharma Sūtra* (i. e. several centuries before the Christian Era) and east North India did not go in for such marriages and that orthodox *Sūtra* writers like *Gautama* and *Baudhīyana* reprobated such practices. *Manu* forbids such marriages (XI, 172-173).

2. Vide Kane, *History of Dharmasūtra II*, p. 445 (Early marriage for girls). The rule that Brāhmanas girls were to be married between 8 to 10 years became general from about the 6th or 7th century A.D. and continued to modern times. *Manu* (quoted in *Varadarājaśekh* 1, 2 p. 177) said that choosing a bride who was five years old was best "अग्रतो गृणीष्यान्नादा वक्ष्यात्प्रात्परं शुभम्। कुमारीवर्यं दानं मेखडावर्ष्यं तथा ॥"

3. Evidently *agriculture* as an occupation for Brāhmanas about which there are conflicting views. (Vide Kane *H. D. II*, 125). The Vedic literature does not condemn agriculture. Kane discusses several views showing how agriculture was viewed at different times by different writers, from different points of view. *Baudhīyana* (I, 5, 101) states :—

"वेदः कृषिविनाशाय कृषिर्वेदिनाशिनी। कृषिमानुष्यं कुमारीवर्ष्यं कृषिं त्यजेत् ॥"
Hārta declares "the plough-share carries with it destruction of life, therefore it is not for Brāhmanas etc. अदृश्यं साधकं तद् ब्राह्मणे न विद्यते etc. Evidently *Varadarājaśekh* records the *Proemio* of agriculture by the Āndhra Brāhmins which was not approved of by some people.

- (6) The practice of leaving the breasts uncovered¹ current among the ladies of the *Dravida* and *Kerala* countries is an evil practice.
- (7) The mode of sexual enjoyment called the *upari-srata*² current in the country of *Kerala* is an evil practice.
- (8) The practice of climbing the trees current in *Konkan*³ is an evil practice.
- (9) The following practices current in Gujarat are evil practices ;
- (i) Drinking liquor (*Medika* = *Madaka* = liquor used for distillation).
- (ii) Women in menses taking a bath on the third day of the menstrual period.
- (10) The practice of eating flesh⁴ current in the Northern country in the Kali age is an evil practice.

1. Vide p. 385 of C. V. Vaidya's *Mahābhārata Uparāśikha*, Poona, 1922. Mr. Vaidya thinks that the practice of wearing a bodice was not current during the Mahābhārata period. Even now the Madras women go without a bodice. Compare Rāmānand's remark in this connection in his commentary (A. D. 1831) on परशुरामकवचम् G. O. Series, Benares, 1923) p. 41.

“इत्येते सायनिष्ठां साक्षाद्विद्वानामाचारानां प्रामाण्यं पूर्वमीमांसाविदमपि, यथा ज्ञानानां सायनिकानामपिः । तथा दक्षिणदेशीयानामपि कुञ्जुकारणानामपिः । सङ्कुञ्जुयति इत्यादि कुञ्जुकारणानामपिः । अस्मात् विचरन्तं दृष्ट्वा अनेन्यमानावरेद इति अश्विनिस्तवचनविद्वदः । अतो न विधिद्वयम् ॥”

2. *Upari-Srata* may be the *spartaka* mode (also called विपरीतक) which is described in the *Sakha Kalpadruma* as follows :—

“कामिण्यर्द्धं कृत्वा द्वितीयं कल्पसंस्थितं ।

नारी काम्ये क्षमी वेद्यः स्याद्विपरीतकः ॥”

(Vide *Apte's Dictionary* 1890, p. 320).

Apte states that this mode is “also called विपरीतक”. *Dāmodara Gupta* [in his *Kaṣṭhānanta* (C. 775 A. D.) Stanza 575] refers to विपरीतरत but Mr. Tripaṭhī, the Editor, equates, विपरीतरत with पुद्गलयित (“पुद्गलयितकर्म पुद्गलयितं विपरीतरतम्”). *The Kāmasūtra* (p. 162 of N. S. Press, Edn. 1900) refers to विपरीतरत as follows :—

“इति विपरीतं वरमवमवर्जम्”.

3. As a native of Konkan (Sangameshwar Taluka of Ratnagiri District) I can vouch the correctness of this observation. The Konkan abounds in tall fruit trees like the mango, the jack, the betelnut tree, the coconut tree etc. Not only children and men but also women are in the habit of climbing the trees for gathering fruit on which they live in certain seasons. Of course people with pendulous bellies can never dream of climbing up a tall tree and for them this Konkan practice is certainly a *dangerous*, a *degrading* practice.

4. Cf. Trivikrama (c. A. D. 915) in his *Nalacampū* (1885-N. S. P. Bombay) p. 251 (7th Uśhodha) :—Description of marriage dinner given to the army—

“अतो नु कञ्चवी मत्स्यमंथीर्विहितमुदीच्यप्रतीच्यप्राच्यजनाः प्रियलज्जोः, मोनसुके न क्षामति । विरतोः कश्च दक्षिणात्येषु मांसकान्यवहारः । तदाकर्म्मता ओ नैषथाः etc.”

The army was served with *काञ्चोदन*, *सिंघारिणि*, *साकानि*, *इक्षुरस* etc. a purely *vegetarian* menu much to the chagrin of Northerners,

- (11) The practice occasionally resorted to by the people of the *Parvata* country, allowing the begetting of sons on a woman by her husband's brother, is an evil custom.¹
- (12) The practice of constant smearing of one's body with oil current in *Maithila* and *Gauḍa* countries is an evil custom.
- (13) Abandonment of the Vedas current in the *Gauḍa* deśa is an evil custom.
- (14) The following practices current among the people of the *Kānyakubja* country are evil practices :—
 - (i) Eating food cooked in ghee purchased in the market.
 - (ii) Touching each other at the time of marriage and other feasts.
- (15) The *mukha-surata* mode of sexual enjoyment current in the *Utkala* country is an evil practice.
- (16) In the *Gauḍa*, *Drāviḍa*, *Kerala* and *Utkala* countries the people eat cooked rice prepared from the un-husked grains of the *Kalama* rice ripened in the field.
- (17) The practice of eating *tāmbūla* (betel-nut) in the street current in all provinces is an evil practice.

The foregoing list of evil practices (or *durācāras*) recorded by Varadarāja, a pupil of the great grammarian Bhaṭṭoji Dikṣita, will be found useful by all students of the history of Indian customs and manners as they prevailed in different centuries. Varadarāja, though a southerner, had settled at Benares and there studied under Bhaṭṭoji like many other southerners. Benares was the centre of learning for many centuries where people from all parts of India gathered together and carried on their literary pursuits. In the social concourse of these learned preceptors and their pupils occasional discussions on the provincial customs and manners must have taken place and the present list of *durācāras* was given to us incidentally by Varadarāja may be taken to be a summary of such discussions incorporated in the *Gīroḍa padamañjari* for literary embellishment. If we value the accounts of our manners and customs recorded by foreign travellers from the earliest to the last for the reconstruction of the history of our culture, we have every reason to value Varadarāja's list of *durācāras* or evil practices so called. These practices were obviously current in the different provinces of India in the 17th century. Even to the modern taste all these practices are not evil practices. To Varadarāja also they did not appear as *durācāras* as will be seen from the remark of

1. This custom is identical with the *Niyoga* of the *Dharmasūtra* texts. Mr. C. V. Vaidya thinks that the *Niyoga* was current in India among the Aryans in very ancient times but it was not current in the *Mahābhārata* times (Vide pp. 314-316 of *M.M. Upaniṣads*, Poona 1922). We must identify *Parvatadeśa* where the practice was occasionally observed according to Varadarāja. Kane in his *Hist. of Dh. II. Chap. XIII on Niyoga* states (p. 607)—*Niyoga* was a survival from the remote past and gradually it became rarer and rarer till in the first centuries of the Christian era it came to be totally prohibited. In view of this statement we must see if the passing of *Niyoga* in *Parvatadeśa* as stated by Varadarāja as late as c. A.D. 1630 is corroborated by other contemporary evidence.

the Brahmin host in the dialogue: "सर्वत्र दुराचाराः संति एव". Every social group has its own manners and customs. It is generally the outsiders that have a tendency to criticize the customs and manners of groups other than their own. To a student of Indian history and culture all these manners and customs as also their criticism recorded in literature, whether contemporary or subsequent, are very valuable as they give him a better *terra firma* to stand upon and cast his glance towards the past than the mere imaginary accounts of our ancient culture which at times fill the pages of our histories without any substratum of facts.

The entire body of the *dharmasāstra* literature though a reflection of Hindu customs and manners current at different periods of the evolution of Hindu Society, cannot prove the existence of certain customs and manners in specific periods of history as the tendency of the writers of the works on *dharmasāstra* is to quote previous works on the subject to justify or condemn certain customs and manners. We cannot, therefore, say definitely from the statements of these works if these customs or manners were all of them actually current in society when these works were composed. For a correct history of these customs we must collect the testimonia of foreign and Indian observers who may have incidentally or purposely left some accounts of these customs. Such testimonia are very useful correctives to the rosy pictures of our culture drawn sometimes on the strength of a few statements from *dharmasāstra* works gathered at random by amateurs in Indology.

Not having travelled in different parts of India I am unable to verify if any of the *durācāras* mentioned by Varadarāja are now current in the specific provinces mentioned by him. I must, therefore, leave this work of verification to my readers in these provinces. Varadarāja's work has been imitated by Dhunḍirāja, son of Śrīraṅga-bhaṭṭa. He was a Mahārāṣṭra Brahmin of the Mādha sect as I have proved elsewhere.¹ His work also is called the *Gīrvānapadamāñjarī*. It was composed sometime after A.D. 1700. Dhunḍirāja has incorporated some new matter in his work, though he has kept the form and style of his work identical with the form and style of Varadarāja's work. Dhunḍirāja's work also contains a list of *durācāras* of different provinces, which I have examined in a separate paper² with a view to see how far he has added to Varadarāja's list or improved upon it in the light of his own experience and knowledge during his stay at Benares towards the close of the 17th century.

1. Vide my papers on (1) "An Echo of the siege of Jinji in a Sanskrit Grammatical Work etc." contributed to the Indian History Congress, Madras, 1944 and (2) "Glimpses into the Economic, Industrial and Social Life of Bengal as given by a Mahārāṣṭra Brahmin of the 17th Century" (*Indian Culture, Calcutta*).

2. *NIA*, VII, pp. 136-139.

9. ANTIQUITY OF THE CŪSTOM OF HOLDING GRASS IN THE MOUTH AS A SIGN OF SURRE DER IN THE LIGHT OF A REFERENCE TO IT IN THE MAHĀBHĀRATA*

During the course of my studies pertaining to the literary and cultural history of India for over three decades, I was constantly faced with the necessity of studying the history of Indian proverbs. Though I could not divert my attention to this very fascinating field of research in the history of our proverbs owing to other commitments I tried to satisfy my desire in this respect by writing out one or two papers with a view to examining the possibilities of original research in this line. One of these papers deals with the history of the proverb: "To hold grass in the mouth" (*trābhakṣapa-nyāya*) current in Sanskrit and Prakrit languages. To hold grass in the mouth means to surrender. The practice of holding grass in the mouth as a sign of surrender is a very old practice not only in India but in Europe as the Roman historian Pliny refers to it as I have proved in my paper. The following table gives at a glance the chronology and geography of this practice as recorded by me in my paper with full evidence:—

Chronology	Geography	Source of Evidence	Remarks
A. D. 23-79	Italy	Pliny (Natural History)	Latin phrase: "To give grass" meaning "to acknowledge oneself vanquished."
A. D. 630	North India	Bāṣa (Harṣa-Carita)	Cowards holding grass in the mouths as a sign of surrender.
A. D. 1305	Gujarat	Merutuṅga (Prabandha Cintāmaṇi)	Two references to grass in the mouth as a sign of surrender.
A. D. 850-950	Kanauj	Kṣemilāvara (Caṇḍakaśūka)	Stage direction to put grass on Hariścandra's head when he wishes to sell himself as a slave.

* *Chaitika Abhinandan Grantha*, pp. 1-4.

1. Vide pp. 21-24 of *Gurukul-patrika* (Aśāḍha, Sakaṭ 2007-July 1998), where a Hindi rendering of my paper has been published. The original English paper will appear in the *Indian Culture*, (Calcutta) in the volume in honour of the late Dr. B. M. Barua.

Chronology	Geography	Source of Evidence	Remarks
A. D. 1483-1530	Afghanistan	Baber (Memoirs)	Afghans holding grass between the teeth as a sign of surrender.
A. D. 1596	Maharashtra	Rudrakavi (Rajpradibha-varṣā-mahākāvya)	King of Jaypur with grass in mouth and an axe on his neck, surrenders to the king of Baglan.
A. D. 1650	Andhra	Venkaṭādhvari (Viśvagūḍārśa)	Reference to holding grass in the mouth.
A. D. 1695	Maharashtra	Sabhasad-Bakhar	Enemy surrendering with grass in mouth.
	Europe	Liebrecht (Glossary of Indian Terms).	Liebrecht traces the custom of holding grass in the mouth in Europe.
	England	Tawney (Notes on Prabaṇḍha Cintāmaṇi)	Persons holding grass in mouths indicating their wish to be hired as false witnesses.
	Scotland	Campbell (Tales of Western Highlands)	Custom of taking straw in the mouth to show one's willingness to take service.
	Maharashtra	Acworth (Maratha Ballads)	Reference to putting grass in the mouth.
C. A. D. 1790	Mysore	Fresco in Tippu's Palace	Col. Bailey shown with grass between the teeth.
		Meadows Taylor (S-sta)	Reference to prisoners putting grass in their mouth and crying for quarter.

The prevalence of the custom of holding grass in the mouth as a sign of surrender in Europe, Afghanistan and India as vouched by the evidence recorded by me in my previous paper on this subject needs to be accounted for by linguists and ethnologists. In the table given above I have shown the antiquity of this custom in India up to about A. D. 600. It is possible to take this antiquity backwards by at least 500 years as I have traced a reference to this custom in the *Mahābhārata*.

Nilakanṭhabhaṭṭa¹ in this *Nītimayūkha* (Gujarati Printing Press, Bombay, 1921, p. 106) deals with the topic of *dharmayuddha* or righteous war. He quotes many authorities for the guidance of warriors. Among the authorities quoted we find the following verse from the *Rājadharmā* section of the *Sāntiparvan* of the *Mahābhārata* in which we find a list of *avadhya* (not to be killed) persons :—

Page 106—“राजधर्मेषु—

“ हृदो बालो न हन्तव्यः नैव स्त्री नैव च द्विजः ।

तृणपूर्णमुखश्चैव तवास्मीति च यो वदेत् ॥”

(One should not kill (on the battlefield) an old man, a child, a woman, a brahmin and a person, who with his *mouth full of grass* says : “I am yours.”)

The above verse from the *Rājadharmā* as quoted by Nilakanṭhabhaṭṭa is exactly identical with that found in the Bombay edition of Ganpat Krishnaji (98-49) but in the critical edition of the *Rājadharmā* by Dr. S. K. Belvalkar the constituted text for this verse (verse 47 of *Adhyāya* 9), p. 466) is given as follows :—

“ वृद्धं बलं* न हन्तव्यं नैव स्त्री न च वै द्विजः ।

तृणपूर्णमुखश्चैव तवास्मीति च यो वदेत् ॥” ४७ ॥

The star mark on “बलं” indicates that it is an emendation of the reading by the Editor. On p. 671 the editor gives the following note bearing on this emendation :—

“47a) वृद्धं* बलं ‘a fighting force cut off from the main army’. हृद्-बालो and वदबालं are evidently *lect. fac.* and, in the battle, the question of killing them cannot arise. In the case of the स्त्री and the द्विज as represented by सिखण्डि and द्रोण the question stands on a different footing.”

Scholars interested in textual criticism should satisfy themselves about the validity or otherwise of the above remarks. I am inclined to accept the text of the verse as quoted by Nilakanṭhabhaṭṭa and confirmed by the Ganpat Krishnaji's edition referred to above. The reference to *holding grass in the mouth* (तृणपूर्णमुखः) in the second line of the verse remains unchanged in the constituted text and hence warrants a conclusion that the custom of holding grass in the mouth as a sign of surrender was current at the time when the text of the *Rājadharmā* section of the *Mahābhārata* was composed, or even earlier. If this conclusion is accepted the antiquity of this custom will go back to the first few centuries of the Christian era. Students of the *Mahābhārata* are requested to point out any other references to this custom traced by them in the voluminous text of the great Epic.

... 1. Nilakanṭhabhaṭṭa (C. A. D. 1610-1645) was the grandson of the celebrated Nārāyaṇbhaṭṭa of Benares. He composed an encyclopaedic work on *Dharmadīpti* called the *Bhāgavanta Bhāṣikāra* in 12 *Mayūkhas* (rays) of which *Nītimayūkha* is one.

10. NOTES ON THE HISTORY OF GLASS-VESSELS AND GLASS-BANGLES IN INDIA, SOUTH-ARABIA AND CENTRAL-ASIA *

Some time ago I published a paper¹ on the *use of Kāca (glass) Vessels in Indian Pharmacy*, in which I recorded references to *Kāca* vessels in the works on alchemy (*rasa-vidyā*) from C.A.D. 1100 onwards. Since this paper was published Dr. M. M. Patkar of the Deccan College Research Institute, Poona, has published his critical edition of the lexicon *Anekārtha Tilaka* of Mahīpa (Deccan College R. Institute, Poona, 1947). According to Dr. Patkar this lexicon was composed between "A.D. 1175 and 1434." This lexicon contains the following references to *Kāca* :—²

काच (II, 43, 261, 359); काच-कलस (III, 192); and काच-कुम्भ (IV, 61).

The texts of these references are as follows :—

Page 10—(II, 43) "काचः सिन्धे मणौ हृत्ते नेत्ररोगे सूदीप्यते"

Page 29—(II, 261) "एतन् उरुहृत्-काचयोः"

Page 359—(II, 359) "मोक्षे क्षारो रसे काचे गुणे च छयणादित्तु"

Page 56—(III, 192) "मुने नरे कले जायाः पलिचः क्षाकणोपुरे ।
काचस्य कलसो कुम्भे परःक्षुः क्षुरिकाफले ॥ १९२ ॥"

Page 71—(IV, 61) "कटसादक ह्येष काचकुम्भे च सादके"

Among the different meanings of *Kāca* terms recorded above I am concerned in this paper with those expressive of *Kāca* vessels viz. the following :—

- (१) पलिच = काचकलस or काचकुम्भ (Mr. Apte in his *Sanskrit-English Dictionary* explains पलिच as "A glass-vessel, pitcher.")
- (२) कटसादक = काचकुम्भ (Apte explains कटसादक as "a glass-vessel, a tumbler or bowl.")

* *Journal of Oriental Studies* (Pardi), I, pp. 9-16.

1. Vide pp. 147-160 of *Bhāratiya Vidyā* (November 1946).

2. Nṛsiṅhaśāstra (c.A.D. 1550-1600) the guru of Bhaṭṭojī Dikṣita refers to *Kāca-māla* (possibly a string of glass-beads) in the following verse in his *Bhedadhikāra* (Benares Sans. Series 1904, p. 119) :—

"गुणरत्नसङ्घाताद् दृश्यते विभक्तं तद्विगुणमनुगुणं वा बीजतां तत्त्वमात्मा ।

अपि विद्यमति उक्लिङ्गाचमासाद्यमत्सा छतयचमभिमालां शारदास्यछच्छाम् ॥ ११ ॥

Nārāyaṇaśāstra comments—

"एषामभिन्ननीकमभिमालां उक्लिङ्गिष्याम्यै काचयचिमासा प्रान्त्वा रश्मति अपि नैतामतां सा प्राकैः छयेत्यत इत्यर्थः"

In my previous paper I have already recorded the terms for *Kāca* vessels such as :—

काचकूपी, काचभाजन, काचसाराव, काचघट, काचघटी, काचघटिका, काचकूपिका, काचकीटक, काचभाण्ड, काचपात्र, काचसिंसिका, काचसिंहरथा, etc. To this list we may add पलिष, कटसादक, काचकलश and काचकुम्भ mentioned by Mahīpa between A.D. 1175 and 1434, a period during which different kinds of glass-vessels were in use in India as proved by the evidence recorded by me in my earlier paper of this subject. We must now see if any other lexicons record any terms for *Kāca*-vessels.

In the *Vaiṣya-varga* of the lexicon *Trikāṇḍaśeṣa* of Puruṣottama-deva (before 1550 A.D.—Keith) we find the following references to *Kāca*-vessels :—

Verse 63 of *vaiṣyavarga* (द्राव्य-कोष संग्रह, Benares, 1873)—

“सरसोदः सरपात्रं शिघ्राणं काचभाजनं”

(Apte in his Dictionary explains “शिघ्राणं” as glass-vessel). The *Medinikōśa* (C.A.D. 1200-1275) also mentions “शिघ्राणं” in the following line—

“शिघ्राणं काचपात्रे च लोहनासिकयोर्मथे”

The *Śabdaratna-Samanvaya-Kōśa* (G. O. Series, Baroda, 1932) of king Shahaji of Tanjore (A.D. 1684-1712) contains the following references to *Kāca*-vessels—

Page 47—“... कटसादकः। सादके काचकलरो”

Page 70—“... पलिषो गोपुरे मत्तः। प्राकारे काचकलरो...”

Page 116—“... सिङ्घ्राणं काचपात्रे स्यात् ...”

Page 192—“... कुम्भानं (ळ) स्यात् काचपात्रे”

It appears from these specific names for glass-vessels viz.—

कटसादक, पलिष, सि (सि) ष्वाण and कुम्भ (ळ) that *Kāca* or glass-vessels of different sizes were used in India from C.A.D. 1100 onwards. These names, however, do not help us to visualise the glass-vessels indicated by them.

The lexicon *Amarakośa* (C.A.D. 500-800) mentions the word सिङ्घ्राण in the following line—

Kāṇḍa Vaiṣyavarga 9, verse 98), Page 385 of *Amarakośa* (N. S. Press, Bombay, 1905) :—

“अथ मण्डूरं शिङ्घ्राणमपि तन्मले ॥ ९८ ॥”

1. King Bhoja (A.D. 1050) in his *Yuktikośapatara* (ed. by Jivara Candra Śāstri, Calcutta, 1917, p. 78) mentions several kinds of cups (*Coṣakā*) in the चपकोष, among which we find स्फाटिक and काच cups (स्फाटिकं काचमेव च). Very probably काच चपक means here a glass-cup.

Bhānuji Dikṣita (c.A.D. 1630) says that मण्डूर and सिद्धाण are synonyms for लोहकिण्ट (rust of iron). It remains to be seen how the term सिद्धाण of *Amara* came to be applied to काचपात्र or glass-vessel. *Amara* nowhere mentions काचपात्र.

The *Rājavyavahāra-Kośa* (Poona, 1880) of Raghunātha Paṇḍita (about A.D. 1676) explains मीना as काचसार, and सफाय as काच in the following line—

Page 5 (कार्यस्थानवर्ग)—“काचसारस्तु मीना स्वात् सफायः काच ईरितः ॥ ५३ ॥”

The Marathi Dictionary *Śabdakośa* (by Date and Karve, Poona, p. 2279) mentions the term चिहोर in the sense of a superior kind of glass. The *Rājavyavahāra-kośa* (p. 5) explains this term as स्फटिक in the following line—

“चिहोरः स्फटिको मयेत् ॥ ५२ ॥”

The term चिहोर is also applied to a kind of bangle used by ladies.

In the *Bhogyavarga* of his *R. Kośa* Raghunātha Paṇḍita refers to प्याला (cup) and बीसा (bottle) as follows :—

Page 8—“प्याला तु चष्मो शेषः बीसा नाम मयेत् कुपी” ॥ ८८ ॥

The foregoing references to glass-vessels found in the different lexicons between c.A.D. 1000 and 1700 naturally raise the question about the manufacture of this glass-ware in India or outside and its chronology. In this connection we have to consider the history of the use of glass-bangles by Indian ladies now current in different parts of India. I, therefore, record below some notes which may supplement the data already reported by me in my previous paper on this subject :—

(1) The *Rājavyavahāra-Kośa* (c.A.D. 1676) referred to above mentions a bracelet in the following line :—

Verse 53—“इस्तकहे स्वात् इस्तककुणम्”

It also mentions *Kāsāra* as the man who prepares the bracelets—

Verse 380—“स्वात् कङ्कनकरः कासारः”

At present the *Kāsāra* sells glass-bangles and I presume in the 17th Century he did so. It is not however, clear from the above references if he manufactured *glass-bangles* as such.

(2) *Bangles of green glass* were in use on the Coromandel coast between A.D. 1679 and 1679 as will be seen from the following reference :—

Thomas Bowrey in his *Geographical Account of the Countries round the Bay of Bengal* (1669-1679) (Flak. Society, Cambridge, 1905) speaking of the Mallabars (of Choromandel) observes :—

Page 35—“The wealthiest sort have *sheckles* (shackles) of *silver* upon their Arms, neare Soe high as the Elbow, from the wrist upwards, others of *brass* or *copper* and some have them of *green-glass*, with great *brass* rings upon their tows.”

Page 34— "The Banjans and Gentues wear in their noses a ring or pendant of gold or silver". At present glass-bangles and nose-ring are used by married Hindu ladies as signs of married bliss. Widows are prohibited from using these signs of Saubhāgya (married bliss).

(3) *Glass-bangles* (bāṅgaḍī) appear to have been manufactured at Nasik (Bombay Presidency) about A.D. 1821 as proved by letter No. 108 dated 22nd December 1821 (Page 1011 of Vol. VII (1943) of *Historical Selections*, Baroda). This letter is a "Permit to the bangle-dealer to the Palace exempting him from duty on bangles worth Rs. 300/- that he was importing from Nasik.

(“सत्कारम कासार नि ॥ सरकार हः देसी बांगल्या जाणाव्यास नाराकास जातो”)

This is a clear reference to *deśī bāṅgdyā* (indigenous bangles) taken to Baroda for palace use. Very probably they were made of glass.

(4) The *Ain-i-Akhbari* (A.D. 1590) Vol. I (Trans. by Gladwin, Calcutta, 1897) refers to *glass-manufacture in Behar and in the Soobah of Agra* :—

Page 318— *Soobah of Behar.*

"Behar is famous for parrots and goats—gilded glass is manufactured here".

Page 325— *Soobah of Owdh.*

— articles imported from northern mountains include "glass toys".

Page 329— *Soobah of Agra.*

"Allore has considerable manufactures of woolen carpets and glass".

(5) The *Bombay Gazetteer* (Dharwar) Vol. XXII refers to bangle-dealers and bangles :—

Page 233— "*Bangarbaras* or *Bangle-makers* a branch of *Manyars* are like them descended from local *Kāsār* converts who are said to have embraced Islam during the time of Aurangzeb (1686-1707). They make *Wax-bracelets* and sell *Chinese glass-bangles* which they buy from whole-sale *Vāṇī* dealers who bring them from Bombay... They sell both to Hindus and Musalmans".

Page 235— *Manyars* or *glass-bangle makers* are the descendants of local Hindu *kāsārs* (converted during the reign of Aurangzeb)". *Chinese Competition has forced the Manyars to give up their old craft of wax and glass bangle-making*".

(6) The foregoing remarks of 1880 warrant an inference that the *kāsārs* (or *Manyars*) manufactured *glass-bangles* in the 17th century during the reign of Aurangzeb and consequently the statement of the *Rājavyavahāra-kośa* (c. A. D. 1676) viz. "कङ्कणकरः कासारः"... (i.e.

"*kāḍḍ* means a bangle-maker" may suggest a reference not only to the manufacture of metallic bangles but also to *wax* (or rather lac) and *glass-bangles* as well.

(7) The *Prabandhacintāmaṇi* (A. D. 1305) of the Jain author Meru-*tuṅga* records a story about the physician *Vāgbhaṭa Vaidya-Vāgbhaṭa-prabandha* in which we get a reference to a *kāca-kumpaka* (glass-bottle) and its breaking by dashing on the ground (pages 314-317 of *Prabandhacintāmaṇi* ed. by Ramachandra Sastri, Bombay, 1888, Sarga 5 "सायनं काचमये कुम्पके स्वल्पे काचकुम्पकं भूमौ भस्कराय वसुधाम्")

(8) Prof. V. R. R. Dikshitar in his article on "Southern India and China" (*Journal of Sino-Indian studies, Calcutta*, October 1946-January 1947, Vol. 11, pp. 157 ff.) refers to three embassies sent by the Chola monarchs to China in the 11th Cent. A. D. An account of these embassies has been recorded in the Chinese annals, especially *Chau Ju-Kua*. The dates of these embassies are as follows :—

Page 170— A. D. 1015— Embassy sent during the reign of Rājārāja I.

A. D. 1033— Embassy sent by Rājendra I.

A. D. 1077— Embassy sent by Kulottuṅga I was most notable and a detailed account of this embassy is available as follows :—

"The embassy sent by Kulottuṅga consisted of as many as *Seventy-two men*. They carried with them as tributes—

(1) *Glass*, (2) *Camphor*, (3) *brocades*, (4) *rhinoceros' horns*, (5) *ivory*, (6) *incense*, (7) *rose-water*, (8) *putchuk*, (9) *borax*, (10) *Cloves* etc. In return the embassy received 81,800 strings of Copper cash, each to the value of a dollar.

Was the *glass* taken to China in A. D. 1077 manufactured in India or outside?

(9) Arthur Lane and R. B. Sergeant in their article on "Pottery and Glass Fragments from the Aden Littorel, with Historical Notes" (*J. R. A. S.* 1948, parts 3 and 4, pp. 108-133) make some historical remarks on "*Arab Glass in the Far East*" (pp. 117-119). The following points in these remarks are noteworthy in connection with our inquiry about the history of glass in India :—

(1) Hirth and Rockhill (p. 16 of *Chu-fan-Chih on the Arab and Chinese Trade in the Twelfth and Thirteenth Centuries*, St. Petersburg, 1911) quote a Chinese Source written prior to A. D. 572, dealing with the period A. D. 3rd 5-556 which states that the following articles were either imported or made known by the Persians to the Chinese, "Coral, amber, Cornelians, pearls *glass both transparent and opaque*" etc. all of which are products, *characteristic of the South Arabian coast*. Describing the markets of pre-Islamic Arabs Kalkashandi says that in Sanā, Capital of the Yemen Arab,

merchants used to buy *Kharas* (glass beads or trinkets). These indications suggest that glass may have been manufactured in southern Arabia before Islam.

(II) Writing in A.D. 1178 Chou Kiifei says, "The products of Ma-li-Pa (the Hadramawt Coast of Arabia, probably including the whole of the Southern Coast and the Fort of Aden) are—

Frankincense, ambergris, pearls, *opaque glass*, *rhinoceros horns*, *ivory*, coral *putchuk*, myrrh, dragons-blood, asafoetida, liquid storax, oak-galls and *rose-water*, to trade in all of which the countries of Ta-shi resort to the place. "This passage seems to be fairly sound evidence of the manufacture of glass on the South Arabian Coast and though *rose-water* is not mentioned by the Arab geographers as an export of South Arabia, Tome' Pires (A.D. 1512-15) speaks of *rose-water* of Şanā and says that Aden exports *rose-water*".

Articles common to the (1) Chinese source mentioning the items of tribute sent by the Chola King in A.D. 1077 to the Chinese emperor and (2) the Chinese source mentioning the products of the Southern Coast Arabia in A.D. 1178 are (1) *Glass*, (2) *rhinoceros horns*, (3) *ivory*, (4) *incense*, (5) *rose-water*, (6) *putchuk*. Very probably the *glass* taken to China in A.D. 1077 from Southern India was a product of Southern Arabia. This probability is confirmed by the Arab geographer Idrisi (c. A.D. 1154) who "Cites Aden as the point of departure for ships destined for Sind, India and China" (P. 113 of JRAS, 1948).

(III) *Arab glass was carried to the Far East in or before the 8th Cent. A.D.*, for several pieces of it are preserved in the *Shoshoin* at Nara in Japan where they were deposited in A.D. 750.

(IV) During the 16th century there was a *cessation of the glass-manufacture of the Arabian coasts owing to the Portuguese blockade of the Muslim world*.

(V) According to Tome' Pires (A.D. 1512-15) articles of *Venetian glass* were brought to Cairo and thence taken to the Far East. He also gives the route by which merchandise was carried to India. This route is as follows :—

Venica - Alexandria - Cairo-Tor - Mecca - Jidda-Aden - Cambay-Goa-Malabar-Bengal-Pegu-Siam. In view of the above history of *glass from Southern Arabia prior to A.D. 1500* and the import of *Venetian glass into India after A.D. 1500* we may reasonably conclude that *glass-vessels used in Indian Pharmacy prior to A.D. 1500* were possibly of Arabic manufacture while those mentioned in Indian Sources after A.D. 1500 were of Venetian origin as the glass-manufacture of the Arabian coasts suffered a disaster after the Portuguese blockade of the Muslim world during the 16th Century.

(VI) Arthur Lane and R. B. Serjeant have collected some useful information about *glass-bangles* found in Aden Littorel (region along

the shore). In view of the commercial contact of Aden during medieval times this information has a possible bearing on the history of glass-bangles in India. I, therefore, note below a few points from this information :—

(a) Numerous *women's bangles of glass* were found at *Kawd am-saila* ("The Dune of the Flood Course") an isolated mound on the *Aden-Lahajyemen* road. They were very elaborate in construction and of *white, red, yellow, blue* colours. Possibly they are relics of a local factory for these ornaments.

(b) Two complete *coloured bangles* in the Victoria and Albert Museum are said to have come *from Persia* and two fairly simple ones were found on the *9th Cent. site* of Samarra in *Mesopotamia*.

(c) At *Al-Mina* in *North Syria* some *glass-bangles* triangular in section and mostly of plain *green glass* were found in graves of *5th to 6th Cent. A.D.*

(d) Elaborate bangles of coloured glass were found in the areas fringing the *Red Sea, Arabian gulf and Persian gulf as far as India*.

(e) The type of the above bangles, presumably current in the Near East before Islam, reached the greatest *elaboration after 9th Cent. A.D. and before the 15th Cent.* (when *Aidhāb* was destroyed). There must have been factories of these bangles in South Arabia.

(f) The technique of using *polychrome opaque glass* goes back to the *XIIth Dynasty in Egypt* and perhaps earlier. It is found in the *Roman "millefiori" bowls* and the *Islamic "millefiori" panels* at Samarra and in the *Venetian glass* of the Renaissance.

(g) *Theophilus* (= monk Roger of Helmershansen near Paderborn—died *A.D. 1120*) describes the *making of glass bracelets with bands and spots of different colours* in his technical treatise *Diversarum artium schedula*, Book II, chapter 31 (A translation of this text will be found in C. Winston's *An inquiry into the difference of styles observable in ancient glass paintings*, London, 1867, p. 380).

As against the possibility of the introduction of glass-bangles from *South-Arabian factories* into India in pre-Islamic and post-Islamic-periods we have to consider their introduction into India from *Central Asia* as indicated in a letter dated *20th November 1947* which I received from Dr. V. S. Agrawala, Superintendent, Central Asian Antiquities Museum, New Delhi. Dr. Agrawala writes :—

"I have not come across any definite reference in Sanskrit Literature to the use of *glass-bangles* but, I think that they began to be used *sometimes about 8th-9th century* i.e. in the early medieval period. Their use seems to have been brought by the foreign tribes like the *Hunas* and *Gurjaras* coming from *central Asia*. Sir Aurel Stein found some *specimens of glass-bangles*, slightly tinted in various shades of *pale green and straw* and often ornamented with applied rib-work or cutting. Please consult "*Descriptive Catalogue of Antiquities Recovered by Sir Aurel Stein and now deposited in the Central Asian Antiquities Museum*" by F. H. Andrews, New Delhi, 1935, pp. 14, 343 and 358".

11. THE USE OF KĀCA OR GLASS IN INDIAN PHARMACY *

(Between C. A. D. 1100 and 1800)

Before we prove the history of glass (Kāca) in India¹ we must collect and put on record all references to काच in Sanskrit and non-Sanskrit sources. The term काच is now applied to glass but in Sanskrit literature it has other meanings such as *crystal*, an *eye-disease*, *alkaline salt*, *wax* etc. as explained in Apte's Dictionary. In the present paper I shall first record some references to काच and its utensils found in the *Rasaratnākara* of Nityanāthasiddha, as available to me in the published edition of its two *Khaṇḍas* काचखण्ड and वादिकखण्ड (ed. by J. K. Shastri, Gondal, 1940). As the *Rasaratnākara* is assigned by scholars to the 13th century² the references to काच in it have some historical value. In fact the use of काच utensils mentioned in Indian medical works or in works on alchemy needs to be proved historically with a view to clarifying the problem of the history of glass in India, which is at present in a nebulous state. With these remarks I note below the references to काच in J. K. Shastri's Edition³ of the *Rasaratnākara* :—

Page 42—“रसकं घोषताम्रं च काचं श्वेतं नृकेयकम् ।
पलानि पंच पंचैव प्रयेकं चूर्णयेत्पृथक् ”

* *Bhadrāyā Vidyā* VII, pp. 147-160.

1. To understand the history of glass in India we must know its history in outside countries. In this connection see remarks on *Glass* in “*Ancient Egyptian Materials and Industries*” by Lucas (Edward Arnold and Co. London, 1934) pp. 115-127. I note some points from these remarks :—

- (i) The Chemical Composition of ancient Egyptian *glass* and *glaze* is essentially the same but *glaze* was applied to the surface. *Glass* was not a separate discovery from *glaze*.
- (ii) Production of *glass* objects on a large scale dates from about the beginning of the XVIIIth Dynasty (B. C. 1580-1350)—a piece of *glass* with inscription bearing the name of Amenophis I in Ashmolean Museum at Oxford.—*Glass* objects from Predynastic period found are Hathor head, Beads, Uret eyes, Mosaic, Blue *glass* vases etc.—Pliny's apocryphal Story of the discovery of *glass* (A. XXVI, 65) is not so fantastic, as represented.
- (iii) Alexandria, one of the greatest *glass*-manufacturing centres of antiquity as vouched by Strabo—References to Egyptian *glass* in Roman literature.—Emperor Aurelian fixed a *tax* on *glass* from Egypt, imported into Rome.

2. Vide काचखण्ड नो इतिहास by D. K. Shastri, 1942, pp. 202-203. Prof. Dasgupta assigns रसराजकरे to the “*later half of the tenth century at the latest*” (Vide p. 90 of Book I of his *Catalogue of Bombay University Sanskrit and Prakrit MSS.*, 1944).

3. This edition is based on a MS. of the *Rasaratnākara* dated *Samvat* 1667 = A. D. 1576 (See p. 184).

- P. 46—"काचकूप्यान्तरे क्षिपवा साकडार्थं ततः क्षिपेत्"
 "काचकूप्यां शुभं दीपततं ज्ञानेन वेदयेत् ।
 भयवा काचकीलेन हवा सृष्टवणेन च ।
 कूपिका च सदा लेप्य सर्वत्राङ्गुलमात्रकम् ।"
- P. 50—"पाप्यं वक्रद्वारायां काचं दङ्गकं क्षिपेत्"
- P. 51—"तं ज्ञातं सोधयेत्पश्चात् येतदङ्गकाचकैः"
- P. 55—"सौवीरं दङ्गलं काचं दवा दवा धमेव हृदम्"
- P. 58—"लखोटं सोधयेत्पश्चात्सितकाचैरेव दङ्गलैः"
- P. 64—"वेताम्रं श्वेतकाचं च दंठकं शल्लपुष्पिका"
 —"वेताम्रं श्वेतकाचं च विषतैश्चपटङ्गम्"
- P. 70—"वह्नीः काचकूप्यांतः क्षिपवा कूपीं सदा क्षिपेत्"
- P. 72—"दंठकं श्वेतकाचं च ऊर्ध्वं दवा निरोधयेत्"
 —"काचं दंठकं दवा मृपायां चाधितं धमेत्"
 —"सर्वं दिनत्रयं मघं काचकूप्यां निवेशयेत् ।
 ह्यम्ह सृष्टकलियायां सुमुष्कायां पथेततः ।
 सखिद्रे बालुकापत्रे कूप्यामारोपितं पथेत्"
- P. 73—"स्वागधीतं समुद्राय स्फोटयेत्काचकूपिकाम्"
 —"सृष्टितकाचकूप्यांतः क्षिपवा ठस्यां क्षिपेत्पुनः"
 —"पूर्ववद् बालुकापत्रे कूपिकामष्टयामकम्"
 —"दिनमेतद्वैतैलेन मघं कूप्यां निवेशयेत्"
- P. 76—"स्वर्णगुणं सितं काचं भयवा नृकपालकम्"
 —"समुद्राय पुनर्वैयं काचं वा नृकपालकम्"
- P. 96—"पठेकं पारवं शुभं काचकूप्यंतरे क्षिपेत्"
- P. 97—"क्षिपवा तत्र शुभं हवा सदा कूपीं च लेपयेत्"
- P. 98—"लखोटं दंठकैः काचैः सोधयेद् वै धमग्धमन्"
- P. 104—"सुदमीनं पवह्वारं काचक्षिपणाकसूरणम्"
- P. 106—"गुटिकां काचकूप्यंतः क्षिपवा तां काचकूपिकाम्"
 "सर्वतोऽङ्गुलमानेन वक्ष्यत्सिकया लिपेत्"
- P. 107—"स्वागधीतं समुद्राय भिस्वा कूपीं समाहरेत्"
- P. 125—"काचकूप्यां प्रयत्नेन गंधनागदुतिस्त्रियम्"
- P. 129—"मघातः शुद्धसूतस्य काचकूप्यां गतस्य च"
- P. 143—"कपित्थिवृजातकळैः समं चाग्यात्रकं हृदम् ।
 मर्दयेदिनमेकं तु काचकूप्यां निवेशयेत् ।
 मरकेतैर्शुभं हवा कूपिकां लेपयेत्सदा ।"
- P. 159—"क्षिपिपश्चात्ततः क्षीतं काचकूप्यां सुरक्षयेत्"

P. 160—"पुत्रकर्षणं तस्याः काचकूप्यां विमिश्रयेत्"

—"काचकूप्यां स्थितैर्द्राविः सर्वमेतत्सुकोकयेत्"

P. 161—"शोकानि रोगद्वन्द्वानि काचकूप्यां वृषश्च वृषश्च ।

रक्षयिष्या प्रयत्नेन प्राप्ते कार्ये विपोजयेत् ॥"

—"काचपात्रे स्थिताः शोण्याः छायायां दिनमात्रकम्"

P. 163—"ह्लावाद्य खण्डसाः क्षिप्या काचकूप्यां निरुष्य च ।

वज्रमृत्तिकाया सम्यक् काचकूप्यां प्रलेपयेत्"

P. 167—"तण्डीतलं काचपात्रे क्षिप्या तस्योपरि क्षिपेत्"

P. 170—"सूर्याग्ने धारयेत् धर्मं रथे वा काचमाजने"

P. 173—"समुद्रयं टंकणं काचमूर्त्वापरतस्य रापयेत्"

P. 175—"विशोष्याय धमेपश्चात् काचटंकणयोगतः"

The foregoing wealth of references to काच and its utensils such as काचकूपिका, काचकीलक amply show the wide-spread use¹ of काच at the time when Nityanātha Siddha composed his *Rasaratnākara*. The expressions "स्फोटयेत् काचकूपिकाम्" (p. 73) and "निषा (काच) कुर्या" (p. 107) obviously refer to the breaking of glass-bottles. It is, therefore, reasonable to suppose that about the 13th century, if not earlier, glass apparatus was actually used in Indian Pharmaceutical preparations. If this suggestion is accepted, we have to prove whether these glass vessels were manufactured in India or outside. If they were imported into India from outside we have to prove the history of this import on documentary evidence. I, therefore, leave this subject to competent scholars who may have made a close study of the history of Indian commerce from the remotest antiquity to the present day.

In another medical treatise called the *शार्ङ्गधरसंहिता* by Śārngadhara, son of Dāmodara (ed. Poona, 1917 with Marathi Trans. by Dr. P. L. Vaidya), who is supposed to belong to the 14th century, I find the following references to काच vessels:—

1. In the *History of Aryan Medical Science* (London, 1896) the Thakore Sahib of Gondal refers to the medical use of glass as follows:—

P. 65—"The use of Steel or glass vessels cures Chlorosis, jaundice, and intumescence" (Utensils for food).

P. 136—*Rajnos* are principal and *Secondary*. Among the Secondary Stones may be mentioned, *सूर्यकान्त*, *चन्द्रकान्त* स्फटिक (Crystal), काच (glass) etc.

P. 184—*As अनुसूत्र* or substitutes for surgical instruments, may be employed sharp pieces of bamboo bark, or pointed crystal, glass or *Kuroinda*..

In these references I don't find any mention of glass or काच used for laboratory apparatus. Manoranjan Ghosh in his article on the *Use of Glass in Ancient India* (pp. 194-201 of *Jour. of Behar and Orissa Res. Society*, Vol. X) gives two quotations from *सुश्रुत* (Cal. 1885, by Kaviratna and Gupta, pp. 584 and 93) referring to काचपात्र in which food should be served as also to काच as an अनुसूत्र or a substitute for glass instrument (for surgical use).

Pages 167-168—(Khaṇḍa II, chap. 12)

—“काचकुप्या विविधिव्य हा व सुदकमुद्रया ॥ १८ ॥
 विविधिव्य वरिष्ठो वपन्ने मुद्रां एत्वा च कोचयेत् ।
 कचः सच्छिद्रविठरीमन्वे कुपी विवेचयेत् ॥ १९ ॥
 विठरीवास्तुकारैर्मृत्वा च कुपिकायकम् ।
 विवेचय बुद्ध्या तद्वयः कुप्याद्विद्युः सन्तैः ॥ २० ॥
 स्फोटयौस्वानाद्योर्ध्वं च ऊर्ध्वं गंचर्चं त्वयेत् ॥ २१ ॥”

P. 179—“राज्ये सुमये पात्रे काचजे वाचयेदयेत्”

P. 199—“काचयाजे ततः स्वास्यां काचकुपी विवेचयेत्”.

The foregoing references to “काचकुप्या”, “कुपी”, “कुपिकायकम्”, “काचजे पात्रे”, “काचयाजे”, “काचकुपी” in the *Śāhīkharāyāhita* clearly prove the widespread use of काच vessels in Indian alchemy. I have not hunted up all the references to काच vessels in this text but the references recorded above are sufficient to prove my point that glass-apparatus¹, which we now use in our modern laboratories, has already entered Indian mediaeval laboratories or *Rasāśālās*. Further evidence in support of this statement is forthcoming from some more works on *Rasavidyā* as follows:—

The *Rasāśāstra*, a work on alchemy of the 12th century A.D. according to Sir P. C. Ray who has edited it in the *Bibliotheca Indica* (Calcutta, 1910), contains the following references to काच:—

काच (A sort of salt called विट लवण) pp. 64, 66 etc.

काचविट = काचमळ. Excretion of mica mixed with saline earth Beng. *malamṣṭi*, p. 69.

काचकुपी = Glass-bottle² p. 184:—

1. See p. 32 of *Catalogue of Venetian Coins* in Madras Govt. Museum by T. G. Aravamudan, Madras, 1938. Possibly the glass apparatus used by Indians in their alchemy was of Venetian origin. Speaking of the Commercial intercourse between India and Italy Mr. Aravamudan observes:—

“The Ship in which Thevenot embarked at Basra for the Indies in 1665 carried ‘some great Venetian looking glasses’. About 1675 glass was dear at Surat & scarcely purchasable unless by way of Stamboul, or Constantinople, from the Venetians, through some citizens had obtained from the Venetians ‘Some pane of painted glass in sashwindows’.”

2. Vide p. 111 of *Supplementary Calendar of India office Documents* by Sir William Foster, London, 1928—Document No. 40 dated 21st December 1616 is an Invoice of goods sent to Ahmedabad which include looking-glasses, Venetian glasses, glass, glass-bottles, window glass etc.—In document No. 301 dated 24th July 1616 from Surat to Ajmere the Factors state “Surely the glass-ware here would find vent at the Court”—Document No. 330 dated 22nd September 1616 from Surat to Ajmere reports “the Slow Sale of their glass-ware” by reason of “a Venetian Store sold to Alsoph Chan”.—These references clearly show how foreign glass-ware was imported into India by the East India Co. and sent inland to such places as Ajmere in Rajputana. Between A.D. 1568 and 1587 Caesar Fredricke, a Venetian merchant, travelled all the East Indies “with a few glasses as his only stock (See p. 21 of *Catalogue of Venetian Coins in Madras Govt. Museum*, Madras, 1938). In the goods which came from Goa in 1592 there were “Venice glasses (Ibid, p. 31). The manufacture of glass in Venice, which was learnt in the factories of Tyre rapidly increased Italian trade with the East (Ibid, p. 33).

“तां मुनि पातयेत् पात्रे लोबीरट्टणाम्बिते ।
काचकूप्याय मध्ये तु तनैकं द्यापदेगिये ॥ १०१ ॥”

The above references have been recorded by Sir P. C. Ray in the *glossary* at the end of his Edition of रसार्णव (Pages 12-13 of *Index with glossary*).

Yasodhara of Jirnagaḍha (Junāgadh), who is supposed to have lived in the 13th century A.D., composed his रसप्रकाशसुपाकर (ed. by J. K. Shastri, Gondal, 1940). In this work I find the following references to काच :—

Page 14—“अधमपात्रेऽथ लोहस्य पात्रे काचमध्येऽथवा”

P. 18—“काचचूर्णे ततो दद्यात् चान्धमूषागतं धमेत्”

P. 21—“ताम्रेण रक्तकाच्येन रक्तसंधयकेन च”

P. 28—“काचटङ्कणभ्यापितं तं च गोलकम् ।”

P. 35—“एकैकेनीपधेनेयं काचकूप्यां निवेशय”

P. 36—“मध्ये तु काचघटिकां सुरापूर्णां निवेशयेत्”

P. 39—“रुधिरकाचघटीविनिवेशितो
सिकतयंत्रवरेण हि दिनत्रयम्”

P. 40—“तदनु काचघटीं विनिवेश्य वै
सिकतयंत्रवरेण हि पाचितः”

—“तदनुसूतवरस्य तु कजली
रुधिरकाचघटे विनिवेशय ॥”

P. 52—“स्थालीमुखे चूर्णघटीं निवेशय”

P. 57—“स्रहवे इदतरं पिष्ट्वा काचकूप्यां निवेशयेत्”

P. 55—“काचचंद्रकणगुंज्याज्यसारवैः शोधयेत्सल्लु”

P. 72—“संगाढ्य यरततो वस्त्रास्थापयेत्कूपिकान्तरे”

P. 78—“यवाभा गुटिका कार्यां शुष्का कुप्यां निधाय च”

P. 82—“घटीमध्ये पयः क्षिपवा मुखे वस्त्रं प्रबंधयेत्”

P. 83—“विदुतः पतते गंधो विदुशःकाचभाजने”

P. 96—“निर्भारं व पीतकाचाभियुक्तं गोमेदं चेदीदशं नो वरिष्ठम्”

P. 109—“कूप्यां संविनिवेश्य चिह्नमृदा संलेपितायां पचेत्”

P. 112—“सन्नेमजेय किल काचमध्ये सुधायं
सश्वसकासक्षयवातकृतेतिसारे”

P. 114—“शुद्धं विषं पलमितं रसमेकज्ञाणं
चूर्णीकृतं तदनु काचशारावलिप्तम्”

—“संवेष्टयेत्तदनु काचमध्ये सुपात्रे”

- P. 116—"ह्रवा पूर्णं काचकूप्यां निधाय
बहिं वचाद्रालुकाख्ये द्विषामम् "
- P. 129—"कर्वेडेन विषेण कज्जलनिमं काचस्य कूप्यां क्षिपेत्'
- P. 137—"कन्याद्वावैमंरंयेदेकयामं पूर्णं ह्रवा काचकूप्यां निवेशय ।
कूपी चापि प्रयेतिसन्धुपूर्णमुद्रां दत्त्वा शोषयेत्प्रयत्नात् "
- P. 141—"पञ्चाक्षेप्यं काचकूप्यां समस्तं कूपीवक्त्रं तान्नपत्रेण रून्धात् "
- P. 153—Chapter X (dealing with about 39 Yantras).
"अथ यन्त्राणि वक्ष्यन्ते पारदो येन यन्म्यते ।
कूपीयन्त्रं पाण्डिकाख्यं दीपिकायन्त्रकं तथा "
- P. 169—"पञ्चाद् रवे काचमध्ये कूपे द्वात्रिंशद्यामकम् ।
वालुकार्थिं प्रदद्याच्च लांगशीतं समुदरेत् । "
- P. 175—"पूर्णं ह्रवा निक्षिपेत्काचकूप्याम्
वापर्यान्ते शी रतिः शाकत्रैवा । "
- P. 175—"काचकूप्यां क्षिपेत्सर्वं कूपीं वालुकाम्बुके "
- P. 179—"काचकूप्यां निधायाय बहिं कुपतिप्रयत्नतः"
—"असतीतिकतैतेन काचकूप्यां निधापयेत् "
—"कूपीतलस्थितं सत्त्वं प्राणं केप्रवरं सदा "
- P. 181—"कूप्यामारोपयेत्सर्वं मुखं तान्नेन रून्धयेत् '
—"कूपीमुखे तु यद्गमं सत्त्वं प्राणं प्रयत्नतः "

In the above extracts from Yaśodhara's रसप्रकाशमुष्कार the references to काच or glass-vessels of different types are clearly indicated by the expressions and words like "कूपीमुख", "कूप्याम्", "कूपीतल", "काचकूप्या", "कूपी", "घटी" (possibly काचघटी), "कूपिकान्तरे", "पूर्णघटी", "काचघट", "काचघटी", "काचघटिका", "काचमाजन", "पीतकाच", "काचसाराच", "काचमये सुपात्रे", "काचस्य कुप्या", "कूपीवक्त्र", "काचमये कूपे" and "कूपीयन्त्र".

In the expressions "काच्यङ्ग" (pp. 28, 65) and "काचपूर्ण" (p. 18) काच means "A sort of salt called विटलवण" referred to by Sir P. C. Ray in his Glossary at the end of his Edition of *Rasārṇava*. I cannot say if पीतकाच (p. 96) means "yellow glass" or some kind of salt like नीलकाच (in the रसार्णव) explained by P. C. Ray as "Black Salt or काचलवण"—p. 42 of glossary).

The *Rasaratna Samuccaya* of Vāgbhaṭa, which P. C. Ray places "between the 13th and 14th centuries A.D." (vide p. li, of *History of Hindu Chemistry*, Vol. I, Calcutta, 1902, Introduction) contains a chapter on the *Laboratory* or रसशाळा (Book VII). The apparatus specified by Vāgbhaṭa includes "retorts made of glass" (p. 65) referred to in the following line:—

"काचापोद्भवाद्यानां कूपिका चष्कानि च "

(Vide p. 34 of extracts at the end of Ray's book).

In Book IX which deals with *पत्रा* or apparatus the *वातुकापत्र* is described as follows :—

“*वातुकापत्र* (Sand bath) : a glass flask (काचकलसी) with long neck containing mercurials is wrapped with several folds of cloth smeared with clay and then dried in the sun. The flask is buried up to three-fourths of its length in sand and placed in an earthen pot whilst another pot is inverted over it, the rims of both being luted with clay. Heat is now applied till a straw placed on its top gets burnt” (p. 69).

In a rare treatise on cosmetics and perfumery called the *Gandha-udda* with Marathi commentary represented by a single MS. in the Raḍḍi collection of the B. O. R. Institute, Poona, we find the following references to *काचपात्र* and *काचकुरि* :—

Folio 34—“काचकुरिये ठेविये”

Fol. 39—“काचपात्रि धारिये”

Fol. 40—“काचपात्रि”

In my paper¹ on this work I have tried to prove that this treatise and its commentary may have been composed between A.D. 1350 and 1550.

In the *Dhātukaḷpa* (from the *Rudrayāmala* tantra) dealing with *Dhātus* or metals I have traced some references to *काच* or glass vessels. These references are noted below from MS. No. 1145 of 1886-92 (*सहस्रनामस्य धातुकल्प*)¹ in the Government MSS. Library at the B. O. R. Institute, Poona :—

This MS. begins :—“ॐ नमः शिवाय ॥ पार्वत्युवाच ॥

अद्यान्तर देवेश भूहि धातोन्न संस्कृति ।

येन विज्ञानमात्रेण साधयेद्वातुमंमती ॥ १ ॥”

The MS. ends on folio 90 :—

‘इति श्रीदश्यामले उमामहेश्वरसंवादे धातुकल्पे सुवर्णमंसा समाप्ता ॥ ध्रुवमस्तु ॥”

श्री देव्यै नमः (This is followed by a line in Persian).

The following references in this MS. would be found useful in determining the probable date of its composition :—

Folio 5—“सोमकं” (referred to as “विषे वातविनासकं”).

Folio 8—The *स्थान*s or places which produce different metals are mentioned. Among these places we find “*श्लेष्मदेश*”, “*किरगदेश*” and “*रुमदेश*” and “*हराकदेश*” (folio 11).

Folio 22—Use of a vessel from foreign country (*श्लेष्मदेश*) is referred to in the following line :—

“कराफिल्लरि कर्ता सोमकं कारयेत्पि ।

तदा सुश्लेष्मदेशस्य भादे पञ्चसौत्यकं ॥ १४ ॥

1. Vide *New Indian Antiquary*, Vol. VII, pages 185-193.

Folio 26—"कुहति" or an earthen pot is referred to in the line
"तदाधो कुहडीमभ्ये रसं तिष्ठति मध्यमे ॥ ७ ॥"

(cf. "कुहिका" (fol. 37)

Folio 71—Pieces of paper (कागद्व्येय संघान्) are referred to in the following lines:—

"मध्यमेधो समा भूमि धोलधोटन कारयेत् ।
मभ्ये तु दापयेत्संघान् कागद्व्येय सुभोदितान् ॥ २४ ॥
छायासुष्कं कृते ते च कागद्व्येयसात्पर्यततः ।
बाह्योर्म्यंतरमे केचित् छेप्या सत्पारदायितं ॥ २५ ॥"

The word "कागद्व्येय" is used in a Marathi document of A.D. 1395 and in a MS. (half on palm-leaf and half on paper) of १५५० dated A.D. 1396 (vide my paper on *Migration of Paper* etc. p. 215 of *Paper making* (1944).

Folio 23—"काचस्य संभ्रतत्रिपात्रे इदसंभवे"

—"काचकूप्यां प्रदातस्यं क्रमाद्वि प्रतापयेत् "

—"कूप्यां स्फोटन निःकृत्य पुनः कल्पे निधापयेत् "

Folio 24—"पुनः कूप्यां प्रदातस्यं रेणुयंत्रे निधापयेत् "

Folio 25—"गुटिकां कार्यायेव शिशिकागलमभ्यगा"

(Here शिशिका is possibly a Glass bottle

Cf. शिषी (Marathi) = glass bottle).

Folio 27—"तन्मभ्ये दापयेत्कूर्पी (Sec "लोहशिश्ये" on folio 28)

Folio 29—अद्यान्तर वारणे साधिता कटिकूपिका"

—"क्रिया रसवती कृत्वा त्वालने कटिकूपिका"

Folio 30—"कर्मण्या केन कर्मण लोहंजा कटिकूपिका"

—"कटिकूपिक्रिया दिव्या"

—"पलं सार्द्धं सुमर्यादा तलस्ये कटिकूपिका"

Folio 35—"काचकूप्ये प्रदातस्यं वह्निवालुकयंत्रगा"

Folio 52—"नीले काचोद्भवे शिश्ये दापयेद्यत्नपूर्वकः"

—"वालुकयंत्रमभ्ये तु दापयेत्तिसिका शुभा"

—"छाया सुष्कं च ते सर्वं काचकूप्यां विनिक्षिपेत् "

Folio 55—"तत्सर्वं रक्षयेत्पात्रे काचस्ये इवरूपिणं"

Folio 56—"द्विमुहूर्त्तं हठे वह्निं शिश्ये वालुकयंत्रगे"

Folio 57—"रसरूपकृतं सर्वं काचपात्रे निधापयेत् "

—"नीलकाचोद्भवे कूप्या बोलयंत्रेण पाचयेत् "

Folio 58—"इदं काचोद्भवे पात्रे वालुयंत्रे प्रपाचयेत् "

Folio 59—"काचपात्रे शुभाचयेत् " and "शुदाक्षिता च शिशिका"

- Folio 60*—“विभास्य विहीकृतशुष्कशीपां
निक्षिप्य शुद्धे हरिकाचपात्रे ।”
- Folio 68*—“युनस्ते भावनादत्ते काचकुप्यां विनिक्षिपन् ”
- Folio 74*—“कटिकूपि(वि)का”
- Folio 75*—“कटिकूर्पिका”
—“तदोष्या कटिकूप्यास्तु उन्नता भंगुलद्वया
- Folio 77*—“भतंश्या कटिकूप्यास्तु ”
—‘ बालयेत्कटिकूर्पण ”
—“अथवा कटिकूर्प्या च जायते नात्र संशयः”
- Folio 78*—“संक्षिप्येन सूदाते च रजः कृत्वा शनैः शनैः ।
जायते कटिकूप्यास्तु कोणत्रयसमन्वितः”
—“विद्रे गोधूमने क्षिप्यवा रक्षिता कटिकूर्पिका”
- Folio 82*—“सहैवं पंचमं ते च मिलिते रसकूपिकं”
- Folio 83*—“साधयेद्भस्मकूपिका”
—“जायते कूपिका दिश्या धनसामर्थ्यदायका”
- Folio 84*—“जायते निमलं स्वर्णं उदितं चैव कूपिके”
- Folio 86*—“गालयेत्तानपूर्वेण भसंश्या कटिकूपिका”
- Folio 87*—“वश्यात्ते काचयुग्मेन पात्रेणैव तु दापयेत् ”
—“शिद्व्या मध्ये तले देयं तदंते रजतोत्तमं”
—“छायाशुष्केन संजाते काचकूप्या विनिक्षिपेत् ”

In the above extracts the terms for glass-vessels are काचकूपी, काचपात्र. The terms विनिय, विनिका, मिलिका, mean “bottles”, either of glass or metal (cf.: “लोहविनिये” on fol. 28). I have not exactly understood the meanings of the terms “कटिकूपिका”, “कटिकूर्पिका”, “कटिकूपी (पी)” used in the extracts.

In the *Ayurveda prakāśa*¹ of Mādihava Upādhyāya (c. A. D. 1650) ed. by R. V. Patwardhan, Poona, 19. 5, there are references to “काचपटी” (p. 48), “काचयुक्तिकयः कूर्पा” (p. 51), “काचकूप्यादी” (p. 129), “काचकूप्या” (p. 153) and काचपत्रेण (p. 3-3).

The references to *Kāca* vessels made in several Sanskrit works from the 12th century to the end of the 17th century A.D., as recorded in the foregoing pages, raise the following questions:—

- (1) Were these *Kāca* or glass-vessels manufactured in India or in foreign countries in commercial relations with India?

1. Vide pp. 139-143 of *Calcutta Oriental Journal*, Vol. 1, 1934 (my article on the date of आयुर्वेदपक्षा).

- (2) If these *Kāca* vessels were products of Indian glass industry, what were the centres of glass manufacture in India between say A.D. 1150 and 1700?

Presuming that these vessels were imported from foreign countries into India we have to examine the history of glass manufacture outside India. In this connection I have to note below some facts from the article on *glass* in the *Encyclopædia Britannica*, vol. 10, 1929, pp. 400 ff. :—

Antiquity and the Early Mediaeval Period :

- (1) We cannot state with any certainty when and where glass was invented. Probably it originated in Egypt.
- (2) The invention of *glass-blowing* did not take place till about the beginning of the Christian Era in the time of the Emperor Augustus at Sidon, the Phoenician city.
- (3) Greece produced no glass.
- (4) There were glass-works in Italy, Spain, Portugal, France, Belgium and Rhineland from 2nd to 4th century A.D. producing glass of high artistic quality.
- (5) Glass works were introduced into Britain from Gaul.
- (6) All important technical processes of glass-manufacture were already mastered in antiquity.
- (7) Alexandria was the home of ancient artistic glass-work—the *onyx* glass with exquisite designs cut in relief.
- (8) In the 5th cent. A.D. a powerful artistic and technical decay set in the glass-works of Gaul, Germany and Britain.

Glass in the East :

- (1) We know little of ancient glass-work in the East throughout the Middle Ages.
- (2) A few ornamented bowls can be traced to *Byzantine* workshops.
- (3) There are some specimens of early mediaeval Egyptian work during the 11th and 12th centuries.
- (4) Some glasses were taken to Europe during the crusades between 12th and 14th century. Most of them were made in *Mesopotamia* and *Iraq*.
- (5) The *mosque lamps* came from Syrian workshops of the 14th century—There are Persian designs (hunters, polo-players, musicians etc.) on some pieces of glass.
- (6) Persia from the 16th to the 18th century produced peculiarly shaped *pots* and *bottles* of glass usually *blue* or *green* and these also influenced the glass-makers of Southern Spain.

Glass work in Europe :

- (1) *Venice*—The earliest knowledge of the *Venetian glass* dates as far back as the *11th cent. A.D.* As early as *A.D. 1291* the glass ovens were removed to the island of *Murano* and penalties were provided for glass-workers taking the secret of the process abroad. The *16th century* was the great period of Venetian glass, which reached technical and artistic perfection and had no equal in the whole of the world.
- (2) In the *18th century* the predominance of Venetian glass was destroyed by the *Bohemian and Silesian cut-glass*.
- (3) From *A.D. 1490* onwards colourless transparent glass predominates.
- (4) Glass-works on Venetian lines were founded all over Europe in the 16th and 17th centuries by renegade Venetian glass-blowers, in *1550* at *Antwerp*, in *1662* at *Brussels* at *Amsterdam* (1597), at *Vienna* (as early as 1428), at *Hall* in *Tirol* (1534).

Glass-work in Spain, France and Netherlands :

- (1) In *Spain* the principal centre was *Almeria* noted for its artistic glassware as early as the *13th century*. Here we find a mingling of indigenous and Oriental motifs and ornament. In and around *Barcelona* in addition to native forms there was a marked Venetian influence.
- (2) In *France* the Italian glass-workers migrated as early as the *15th century*. There were also native glass-works in *Normandy* and *Lorraine*.
- (3) In *Netherland* in the *16th and 17th centuries* there were many glass-factories.

English glass¹ :

- (1) Crystal glass, plate glass and bottles are produced by British factories, but of these, crystal or *flint-glass* is best known.
- (2) *Flint-glass* was introduced about *A.D. 1675*. Before this time glass for table service had been made in England, but it was rarely Venetian, light in weight and of fragile material, made by Italian glass-makers or their English pupils.
- (3) In *A.D. 1570* Italian glass-makers appeared in London, and in *1575* Elizabeth granted a monopoly for Venetian glass to a Venetian *Jacob Verzellini*.

1. Capt. Edward Moor in his *Narrative of Operations* (London, 1794) p. 364 refers to English glass-ware in the Poona markets as follows:—"The City (Poona) is very well supplied by extensive markets, and there is a long street in which are displayed a great variety of English finery such as looking glasses, globe-lamps etc." Saint Tukhrām of Muhamarrā (A.D. 1003-1649) refers to *Kāśā* in one of his *abhangas* as follows:—
 "कोटयात्वा विहरा । येवे नभे काच हिरा ॥ १ ॥"

- (4) In 1592 the glass monopoly was transferred to Sir Jerome Bowes. About 1660 Italian glass-makers were brought over to London and with the help of them George Ravenscroft evolved the famous *flint-glass* about 1675.
- (5) From about 1700 there followed a period of simple *table-ware* for about 25 years.
- (6) From 1747 to 1760 all kinds of glass were made simultaneously. First *Glass Excise Act* was passed in 1745 and the *second* in 1777, which taxed enamel glass, put the glasses out of use.
- (7) Glass-cutting was introduced about 1719 with the help of Bohemian glass-cutters. *After 1750* the art of glass-cutting spread to other parts of the country.

It will be seen from the above notes on the history of glass-manufacture outside India and the references to the use of *Kāca* or glass-vessels in Indian alchemy or pharmacy is almost simultaneous with the development of the Venetian glass centre from 11th century onwards and the tremendous influence exercised by it on subsequent centres of glass-manufacture in Europe.

About the importation of foreign glass into India I have recorded already in this paper the following references:—

- (1) *Between A. D. 1563 and 1581* a Venetian merchant Caesar Fredricke travelled all the East Indies with a few glasses as his only stock.
- (2) In *A. D. 1592* in the goods that came from Goa there were "*Venice Glasses*".
- (3) In *A. D. 1616* the goods sent to Ahmedabad from Surat included "*looking glasses, Venetian glasses, glass-bottles, window glass, etc.*".
- (4) In *A. D. 1616 (22nd September)* there was "*slow sale of their glass-ware*" at Ajmere by reason of "*a Venetian's store sold to Alsoph Chan*" writes a factor from Surat.
- (5) In *A. D. 1665* the ship in which Thevenot embarked at Bssra for the Indies carried "*some great Venetian looking glasses*".
- (6) In *A. D. 1675* glass was dear at Surat "and scarcely purchasable unless by way of Stamboul or Constantinople from the Venetians", though some citizens had from the Venetians "*some panes of painted glass in sash-windows*".

These references clearly show the importation of foreign European glass into India from A.D. 1550 onwards. The present paper shows the use of *Kāca* or glass vessels in Indian pharmacy prior to A.D. 1550. It remains to be seen if glass-ware was imported into India

prior to A.D. 1550 from non-European centres of glass-manufacture viz. Byzantine, Egypt¹, Mesopotamia, Iraq, Syria and Persia.

In concluding these notes on the use of *Kāca* or glass vessels in Indian pharmacy between c. A. D. 1100 and 1800, I have to request other scholars to note all references to *Kāca* vessels prior to A.D. 1100 from Indian sources. No systematic exploitation of these sources has been carried out with a view to reconstructing the history of the Technical Arts and Sciences of Ancient India and consequently there is a complete gap in our knowledge of these arts and sciences, especially those for which no special treatises have come down to us.

1. Vide *Technical Arts and Sciences of the Ancients* by Albert Neuburger (Eng. Trans. by Henry L. Brose, Methuen and Co. London, 1910). Pages 152-164 deal with glass (Origin of Glass, Egyptian Glass Manufacture, Phoenicians as glass workers, the Greeks, the Glass-work of the Romans and Artificial Stones). The following points may be noted here from Neuburger's Chapter on Glass:—

(1) Pliny's mention that Phoenicians were inventors of Glass is incorrect. (2) Egyptians made varied objects of glass for ornamental purposes. (3) An Egyptian head of green glass found in a pre-historic grave is 5400 years old. (4) In the Berlin Museum there is a glass rod with the name Amenemhat III (about 1830 B.C.). (5) In the Berlin Museum there are pieces of Glass from the Glass factory of Tel-el-Amarna (about 1370 B.C.) as also coloured glass sticks and vessels. (6) From 1st Cnt. B.C. Coloured glass went out of fashion. (7) The Glazier's art was at its Zenith in the period 1550-1200 B.C. (8) Sesostris had a *Statue* cast in glass about 1663 B.C. (9) *Glass-blowing* was an invention of the Phoenicians made between 20 B.C. and 20 A.D. at Sidon. (10) Phoenicians learnt glass-making from the Egyptians and spread it over the Orient. (11) The Egyptians produced *glass-eyes* for their mummies. (12) In Syria and Judaea there was no glass-industry until the time of the Roman Empire. (13) There is only one reference in the Bible to Glass (Job XXVIII, 17). (14) In Mesopotamia glass seems to have been imported. (15) It is doubtful whether glass was known in Greece between 450 and 385 B.C. (16) A vase of potassium glass (of 1600 to 1200 B.C.) was discovered in Pelos in Greece. (17) Glass-work attained excellence among the Romans but their knowledge is of Egyptian origin.

P. S.—Some further references to ancient glass may be recorded here:—*Legacy of Egypt* (ed. S. R. K. Glanville, Oxford, 1941) p. 120, 133-34, about Egyptian glass-making. Plate 20 contains photos of head-crest of glass, and glass vases from the tomb of Tutankhamon.—*Cambridge Ancient History* Vol. II (1926), p. 57 (art of making glass-vessels arose in Egypt in the XVIIIth Dynasty), p. 104, p. 417 (polychrome glass, an invention of the XVIIIth Dynasty).—*History of Egypt* (by Samuel Sharpe, London, 1870) Vol. II, p. 99 (portrait in black glass—A.D. 14-37) p. 233-234 (A.D. 270-275)—Firmus, a Syrian rebel against Aurelian had his house furnished with glass-windows, squares of glass fastened into the frames by means of bitumen. "He had gained great wealth by trading in India; and had a paper trade so profitable that he could feed an army on papyrus and glue".

12. SOME NOTES ON THE INVENTION OF SPECTACLES AND THE HISTORY OF SPECTACLES IN INDIA BETWEEN A. D. 1500 & 1800 *

Recently a friend of mine, who is interested in the cultural history of India, pressed me to write an article on the introduction of *spectacles* into India. I promised him to study this problem with a view to clearing up some wild notions about this problem which prevail even among learned men in this country, some of whom believe that our ancestors used some sort of spectacles to get over the deficiencies of eye-sight. In my search for facts bearing on the history of spectacles in India I began to study their history in foreign sources to enable me to give the proper historical perspective to the subject of my study as the use of spectacles is now current in all civilized nations of today. The reading habit of the average educated man in these nations has received added benefit from the use of spectacles, and last but not least the use of spectacles has enriched the eye-specialists, no less than their brothers, viz. the manufacturers of spectacles and the sellers of spectacles. In spite of the acknowledged benefit from the use of spectacles, a poor man in this country tries to postpone his visit to the eye-specialist and the optician as long as possible, as he cannot afford to pay their heavy charges. This is a sorry spectacle indeed!

Let me now begin my narration about the history of spectacles in general and of their history in India in particular :—

- (1) In the *Shorter Oxford English Dictionary* (p. 1962) the word "Spectacle" is explained to mean "A device for assisting defective eye-sight or for protecting the eyes from dust, light, etc. consisting of two glass lenses set in a frame which is supported on the nose and frequently kept in place by 'legs' passing over the ears."

The usages of this word and its derivations as recorded in this Dictionary are as follows :—

A. D. 1640—"Reading much, yet never used spectacles or other help.

I this evening did buy me a pair of green spectacles."—Pepys¹.

* *B. I. S. Mandal Quarterly*, XXVIII, pp. 32-46.

1. In the *Reader's Hand-book* by E. C. Brewer, London, 1911, p. 824, we get the following note on *Pepys's Diary* :—

"Pepys died in 1703, but his *Diary* was not published till 1825. It is in short-hand, and is a record of his personal doings and sayings from *January 1600 to May 1670*."

Brewer in his *Dictionary of Phrase and Fable* (London, 1912) refers to a device of Thackeray in drawings made by him (p. 1165). In *Punch*, Vol. XX. No. 495, p. 8 is a butcher's boy chalking up "No Popery" and the tray forms a pair of Spectacles, showing it was designed by Thackeray.

A. D. 1507—'Spectacled'—Provided with or wearing *Spectacles*.
It would appear from the above references that the use of spectacles had become current in England some time before A.D. 1600.

(2) In the *Supplementary Calendar of Documents in the India Office* (A.D. 1600-1640) by Sir William Foster, London, 1928, we find many documents which specify the goods imported by the East India Company into India since the grant of the charter to the Company by Queen Elizabeth on 31st December 1600. From Document No. 259 [dated 23rd February 1616 we learn that William Biddulph was appointed by the Company to be the Chief of their factories at Agra and Ajmer. Ajmer was seat of the court at this time. In Document No. 330 dated 22nd September 1616 addressed to Biddulph by Kerridge, Barker and Mittford at Surat, Biddulph is advised to consult Asaf Khan as to the goods most likely to be in demand at the court, because Biddulph had reported in three earlier letters "the slow sale of their glass-ware, strong waters, Spectacles, prospective glasses etc. and deprecated any further supply by reason of a Venetians Store sold to Alsoph Chan (Asaf Khan)."

It is clear from the above Document that *Spectacles were introduced by the agents of the East India Company into Rajputana* as early as A.D. 1616 within 16 years since the grant of the charter to this Company by Queen Elizabeth on 31st December 1600. It is for Hindi scholars to record any references to spectacles in Hindi literature in Jehangir's time. Some references to spectacles are likely to be found in Persian sources of this period and I trust that scholars conversant with these sources will record them, if they feel interested in the subject of the present study.

(3) Before I record references to the use of Spectacles in Sanskrit and Marathi sources both before and after A.D. 1600, I would like to invite the attention of my readers to the following remarks of Dr. Albert Neuburger on pp. 163-164 of his "*Technical Arts and Sciences of the Ancients*" (Eng. Trans. by H. L. Brose, Methuen & Co., London, 1929) :—

In his account of the Glass-work of the Romans Neuburger observes :—

"Spectacles were not known in antiquity; indeed, the effects of concave and convex glass lenses had not apparently been observed or they were not made use of. The only report derived from antiquity concerning the use of an arrangement resembling spectacles comes from Pliny who relates that Emperor Nero used a polished emerald to observe the contests of the gladiators. From this it has been concluded that Emperor Nero was short-sighted and that he used a sort of

lorgnon or monocle. "Lenses" which have been found (in the ruins of Tyre, a grave at Nola, Pompeii, Troy, and so forth) served as ornaments for leather belts and similar objects but *not as magnifying glasses*. On the other hand, the Greeks and Romans were familiar with the *magnifying power of glass* "Spheres" (or globes filled with water, used by shoe-makers for concentrating the lamp-light."

(4) There are references in Sanskrit literature to the *Sūryakānta* or Sun-stone, also called *Sūryamaṇi* (sun-gem) and *Dīpotpala* (shining stone). The Sanskrit literature also refers to *Candrakānta* or *Candramāṇi* or moon-stone or moon-gem. The *Sūryakānta* is also called *Agnimāṇi* (see Apte's Dictionary). Kālidāsa refers to the *Sūryakānta* in the following stanza in his drama *Śākuntala* (Act II, verse 41 on p. 74 of Monier Williams' Edition, Oxford, 1876) :—

“समप्रधानेषु तपोधनेषु
गूढं हि बाह्यात्मकमस्ति तेजः।
एतन्निद्रुकुला ह्य सूर्यकान्ता-
सदम्बतेजोऽभिमादात्मनि ॥ ४२ ॥”

Monier Williams translates the above stanza as follows :—

"In ascetics with whom quietism is predominant there lies concealed a consuming energy (fire). That (energy) like *sun-crystals*, grateful (cool) to the touch, they put forth from the opposing influence of other forces."

Monier Williams observes :— A *crystal lens (sūryakānta)*, however, cool to the touch in its natural state will emit a burning heat, when acted upon by the rays of the sun..... It may be gathered from this passage that its (of sun-stone), properties resembled those of a *glass lens*, which instrument may possibly have been known to the Hindus at the time when this play was written. The following parallel sentiment is from *Bhartyhari* ii, 30 :—

“बद्धतेजोऽपि पादैः स्पृष्टः प्रज्वलति सविगुरिनकाम्तः।
तपेजस्वी पुरुषः परकृत-निहृतं कथं सहते ॥”

(Translation :— "Since even the lifeless (stone) beloved of the sun, when touched by its rays, burns; how then can the man of spirit put up with an injury inflicted by another ?")

We may compare the use of the sunstone¹ for concentrating sun's rays (to a burning heat) to the use of glass globes filled with water"

1. I may note here the following verses about the *Sūryakānta* and *Somakānta* stones recorded in *सुभाषितरत्नमञ्जरी* (N. S. Press, Bombay, 1911, page 228) compiled by K. P. Parab :—

used by Roman and Greek shoe-makers for concentrating the lamp-light.

In the *Aṣṭāṅghaydaya* of Vāgbhaṭa II (8th or 9th century A.D.) verse 42 of Chapter 30 of *sūtrasthāna* refers to सूर्यकांतः—

“एवमद्दोवर्तिगोश्स्तसूर्यकान्तवाराविभिः ॥”

Here सूर्यकांत is mentioned as means for producing एवमद्द or heating of the skin for therapeutic purposes. Hemādri explains सूर्यकांत as स्फटिक.¹

In the *अष्टाङ्गहृदयकोश* (by K. M. Vaidya, Trichur, 1936) the following verses about सूर्यकान्त are recorded :—

(1) *Anonymous* :—

“शुद्धःस्निग्धो निर्मगो निस्तुषोऽस-
योनिर्घृष्टो ह्योमनैर्मह्यमेति ।
यः सूर्योऽनुस्पर्शनिष्ठयूतयन्त्रिः
आरयः सोऽयं कृष्यते सूर्यकान्तः ॥”

(2) *Rājanighaṇṭu* of Narahari (c. A. D. 1450) :—

“अथ भवति सूर्यकान्तस्तपनमगिस्तपनञ्च रचिकाश्चः ।
दीक्षोपलोऽग्निगमो ज्वलनाश्माऽर्षोऽलञ्च वसुनामा ॥”

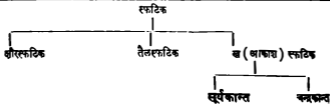
गुणाः—सूर्यकान्तो भवेत्पुष्पो निर्मलञ्च रसापनः ।
घातश्चेद्भ्रमहरो मेध्यः पूजनाद्भवितुष्टिद् ॥”

“सोमकान्तो मणिः स्वच्छः सूर्यकान्तस्तथा न किम् ।
उद्गारे तु विश्वेषोऽस्ति तयोरमृतवह्नयः ॥१६॥
सुपाकरकरत्वाद्द्विर्भवति सर्वतः ।
सूर्यकान्तमग्रेस्तेन मृदुत्वं लोकविभुतम् ॥१७॥

सूर्यकांत is called “आग्नेयप्राचा” (Fire-stone) in the following lines on p. 82.

“मयूखैरभ्रान्तं तपति यदि देवो दिनकरः ।
किमाग्नेयप्राचा निकृत् इव तेषांनि वमति ॥२०॥”

1. Hemaśandra in his *Abhidhāna-Cintāmaṇi* refers to सूर्यकांत in the *धूमिकाश* (Verse 133—“सूर्यकान्तः सूर्यमणिः सुवोद्दिमा दहनोपलः”) He mentions the following classification of स्फटिकस according to वाचस्पति :—



Though the use of the *Sūrya-Kānta* for concentrating sun's rays for producing fire or heat for therapeutic purposes is clear from the above texts, one cannot get a comprehensive idea about its use by our ancestors, unless one puts together representative references to it from Sanskrit and non-Sanskrit sources. The *Sūrya-Kānta* does not appear to me to be a fabulous stone as some scholars believe though fabulous properties may have been ascribed to it. If this view is accepted we have to inquire if any specimens of the *Sūrya-Kānta* have been discovered by archaeologists in Indian excavations. The study of the *Sūrya-Kānta* is allied to the study of crystal or glass beads which are occasionally found in large numbers in some of the archaeological excavations of ancient sites and I strongly hope that some scholar will undertake a quest for the *Sūrya-Kānta* with a view to correlating the literary evidence about it with the archaeological evidence, if any, based on an examination of the ancient crystal beads spherical or otherwise.

(5) I have already recorded evidence to prove the importation and sale of foreign spectacles at Ajmer in Rajputana in A. D. 1616, by the agents of the East India Company. Let us now see if *Spectacles* were introduced into India prior to A. D. 1616. In this connection I record the following evidence which clearly proves the use of spectacles at Vijayanagar 100 years earlier than A. D. 1616, when foreign spectacles were sold at Ajmer :—

Somanātha Kavi was a contemporary of *Vyāsarāya* the great Madhva pontiff (A. D. 1446-1539). Somanātha composed a biography of *Vyāsarāya* called the *Vyāsayogi-Carita* (edited by B. Venkoba Rao, M.A. Bangalore, 1926). In his very learned and critical Introduction, (p. CXX) Mr. Venkoba Rao refers to the use of "वपलोचनगोलक" by *Vyāsarāya* for reading a manuscript about A. D. 1520 :—

"When at the time of the *abhiṣeka* in about 1520 A. D., as will be shown later, Śrī *Vyāsarāya* entered Śrī *Kṛṣṇadevarāya*'s court he was an old man. He must have been 74 then. Somanātha describes that Śrī *Vyāsarāya* then was looking at the lines of a book and wore spectacles, from which great age could be inferred, meaning that otherwise he was strong for his age :—

"अनकमहमवुषोरभिकायामिव पुरतकविनागरेसायां भिभृतभिक्षितचक्षुषं नासिका-
नाडमागप्रसिद्धितेनेव नवनयुगळेन स्वच्छतरोपलोचनगोलकेन भुजुमितवार्धकव्यासिद्धयं॥
(See p. 72 of *Vyāsayogicarita*)'.

1. I am very much indebted to my friend and neighbour Mr. S. T. Pappu, B.A. for drawing my attention to the reference to the use of वपलोचन by *Vyāsarāya* and take this opportunity of thanking him for his great interest in this problem.

In the above Sanskrit passage we have the earliest mention of the use of *Spectacles* at Vijayanagar Court about A. D. 1520. The term *उपलोचन गोलक* is a very happy coinage to describe "Spectacles" with convex eye-glasses. There is no word for "*Spectacles*" in Sanskrit as spectacles as such were unknown in India prior to the Portuguese contact. We can postulate this tentative conclusion till some scholar points out a reference to the use of "*Spectacles*" prior to say A. D. 1400.

As regards the question about the source of the spectacles (*उपलोचन गोलक*) used by Vyāsārāya about A. D. 1520 I may suggest that they were perhaps presented to this influential pontiff by the Portuguese along with numerous other presents which are referred to by Somanātha in the following extract on p. 65 of the *व्यासवागिचरित* (See p. LXVI of Venkoba Rao's Introduction) :

"59. The Portuguese knew Śrī Vyāsārāya very well. Their ambassadors and principal men appeared before Śrī Vyāsārāya with presents many times."

द्विपौरदूतवाक्यसंश्लेषप्रधानपुरुषैरसकृन् समर्प्यमाणानि बहुविधोपहारस्वनादि च" (p. 65.)

In view of the above direct contact of Vyāsārāya with the Portuguese, we may be justified in presuming that the spectacles used by Vyāsārāya were imported into India by the Portuguese about A. D. 1520, if not a few years earlier.

(6) We are now in a position to consider the origin and history of spectacles in Europe as recorded in the *Encyclopædia Britannica* (14th Edition, Vol. 13, p. 920). The following points from this account are noteworthy :—

- (i) Pliny and others refer to glass spheres filled with water, used as burning glasses.
- (ii) E. Wilde (*Geschichte der Optik*, 1838—43) denies all knowledge of spectacle lenses to the ancients.
- (iii) The first authentic mention of *lenses* is that by *Meissner* (A. D. 1260-80) who expressly states that *old people derive advantage from spectacles*.
- (iv) Nicolas Bullet, a priest, in A. D. 1282 used spectacles in signing an agreement.
- (v) The first picture in which spectacles are shown is of A. D. 1360 in Church of San Nicolo in Treviso.
- (vi) In a Sermon on 23rd February, 1305 Giordino da Rivalto stated that *it was only twenty years since the art of making spectacles was discovered.*"

(vii) The use of spectacles dates from *a little prior to A. D. 1280.*

(viii) Processes of making lenses were in use about A. D. 1585.

If spectacles originated about A. D. 1250 in Europe and were in use there since this time, we can easily account for the use of spectacles by Vyāsārāya at Vijayanagar about A. D. 1520 as he was in contact with the Portuguese, who must have presented these spectacles to this guru of Kṛṣṇadevarāya as a novelty from Europe.

(7) I have already recorded evidence to prove the sale of foreign "spectacles" at Ajmer in A. D. 1616 and the use of "Upalocana-golaka" (spectacles) at Vijayanagar about A. D. 1520. I shall now record some evidence from the Marathi literature to prove the use of spectacles in the Deccan in the 17th Century.

At present the name चाळसी is current for "spectacles" in the Marathi language. In the Marathi Dictionary viz. *Śabdakośa* (by Date and Karve, p. 1180) this word is explained as follows:—

चाळसी-शी, चाळिणी-शी—(1) Weakness of eyesight developed at the age of forty.

(2) Age of 40 years.

(3) चष्मा or spectacles.

Usage:—Saint Rāmadāsa (A. D. 1608-1682) refers¹ to चाळसी in his *Dāsabodha, Dāśaka 3, Samāsa 6* as follows:—

“नेत्री ह्येति रोगनवाहिया ।

चाळसी काये प्राणिया ।

वा नोच चाप्यात्मिक ॥ २१ ॥”

We have no means of knowing what kinds of spectacles (or चाळसी) were known to Saint Rāmadāsa in the 17th Century. Elsewhere in the *Dāsabodha* i.e. in his section *लेखनक्रियानिरूपण (Dāśaka 19, Samāsa 1)*² he instructs us to write manuscripts in *middle-sized* characters because manuscripts written in *very* small characters in one's youth will be of no use to one, in old age (owing to weak eye-sight developed with the advance of years).

If spectacles were available in Rāmadāsa's time, why should he ask us to write in middle-sized characters? Perhaps the spectacles of his age were not of the perfect variety to suit all kinds of short sight.

1. See p. 49 of रामदास सुमप्रबंध, Poona, 1906.

2. *Ibid.*, p. 291—

“बहु बारीक तरुणपणी ।

कामा नये म्हातारपणी ।

मध्यम लिहिण्याची करणी । केमी वाहिजे ॥१०॥”

(8) Corresponding to the expression "उपलीपनगोळक" (spectacles) used by Somanātha Kavi about A. D. 1520 we have the term "उपनेत्र" now current in the Deccan. This term for "spectacles" was also current in the 17th and 18th Centuries as will be seen from the following quotations recorded in the *Sabdakosa* (p. 392):—

The Marathi poet *Vāmanaṣaṣṭī* (A. D. 1636-1695) states that "the spectacles can see what the eyes cannot see."

"जे न देखती नेत्र । ते देखती उपनेत्र"

—(पद्यार्थदीपिका व. ११२)

Another Marathi poet *Moropant* (A. D. 1729-1794) refers to उपनेत्र (spectacles) in the following line:—

"होय मला ह्याचंमह उपनेत्रेंचि कीं मला बुद्धी ।"

—उद्योगपर्व १, ११.

In our search for the history of *spectacles* in India we have recorded references between A. D. 1500 and 1800. Any scholar can supplement these references by recording more references from the sources studied by him.

(9) In a recent book "Feathers and Stones" by Pattabhi Sitarāmāya (Padma Publications, Bombay, 1946) the following remarks¹ about *spectacles* are recorded:—

"Rolled-gold spectacles and multi-coloured vulcanite or ebonite frames are the modern reminders of *Presbyopia* and also *Myopia*, and not seldom of modern artistic taste claimed by the eyes and the nose and through them the face. But *Presbyopia* is as ancient as man. Our elders had excellent pebbles cut into double convex lenses to serve the long sight that people generally suffer from after forty. In Maharashtra it is known as *Chalesi* (40) and the Uria *Chalesa* (40). In Gujarati it is known as 'Betalan' (42) and in Andhra *Chatwar* (4th decade)."

Though *Presbyopia*² or *Myopia*³ may be as ancient as man it is doubtful whether in the history of any country of the world the use of spectacles in any form was known prior to their discovery in Europe about A. D. 1250. I would be extremely glad if any scholar brings to light any conclusive evidence to provide the use of spectacles in India prior to about A. D. 1400.

1. I am thankful to Mr. S. N. Savadi, B. A. (Hons.), my Senior Cataloguing Assistant at the B. O. R. Institute, for drawing my attention to these remarks.

2. *Presbyopia*: Long-sightedness due to old age.

3. *Myopia*: Short-sightedness.

(10) In the *Imperial Gazetteer of India*, Vol. XIII, p. 462 the manufacture of spectacles from quartz crystals is referred to as follows:—

"*Vallam Vadākusetti*, Town in Tanjore Taluka, 7 miles from Tanjore,—Captured by the British under Joseph Smith in 1771—"The quartz crystals (pebbles) found here are made into *spectacles* of which the natives think highly."

This is really an indigenous manufacture of spectacles in India current about A. D. 1886 when the *Imperial Gazetteer* was published but what is the history of this manufacture? I hope some South Indian scholar will enlighten me on this point.

(11) In the India Office Document of A. D. 1616 mentioned by me at the beginning of this paper reference is made to "*prospective glasses*" sold at Ajmer by the agents of the East India Company. In the *Peshwa Daftar selection No. 34, Letter No. 110*, dated about A. D. 1733 there is a reference "दुर्बिन नली" or telescope used for naval reconnoitring. In P. D. *selection No. 32* there are references to *telescopes*, watches, cups and saucers and other fancy articles imported from Europe. P. D. 32 (Letter 106) refers to a crude photographic camera bought from the English ("सावली पाहुन लसवार कादाववाणी वेदी दुमवावरीज"). Letter No. 105 dated 5-4-1773 refers to "दुर्बिन" or telescope. Letter No. 74 of 19-12-1766 refers to the use of a small telescope (दुर्बिन जहान) by the Peshwa. All these references prove the importation of European articles in which *lenses* were used from A. D. 1600 onwards. These references together with the reference to *spectacles* about A. D. 1520 by Somanātha at Vijayanagar leads me to conclude that spectacles were unknown in India before the Portuguese advent in the 15th century.

(12) In the *History of Medicine* by Douglas Guthrie (Thomas Nelson and Sons, London etc. 1946) we get the following information about "*spectacles*" :—

Page 114—*Bernard de Gordon* (c. 1285), another student or teacher of Montpellier, contributed to the garden of medicine by writing the *Lilium Medicinæ*, which still exists in rare manuscript form. It contains the first description of a truss and the first mention of *spectacles*. Some historians have presumed, on account of his name, that Bernard was a Scot, but it is now generally believed that he was a native of the French Town of Gourdon" (See L. Thorndike, *A History of Magic and Experimental Science*, 6 Vols. New York, 1923-1941; Vol. II, p. 488).

Page 121—*Roger Bacon* (1214-94).

....."Being a man of means he was able to spend large sums of money on experiments, and he has been credited, rightly or wrongly, with the invention of the *telescope*, the *microscope* the *diving bell*, *spectacles* and *gunpowder*, and with the foretelling of aviation and mechanical transport." (See R. Steele "*Roger Bacon and the state of Science in the Thirteenth century in Singer's studies in History and Method of Science*" 1921, Vol. ii, p. 73).

Pages 188-189—"The Early Microscopists—The microscope, which enabled Malpighi to complete the work of Harvey, was probably known to the ancients, although the evidence is inconclusive. In its earliest form it consisted of a simple bi-convex lens. *Roger Bacon* first suggested the use of lenses as *spectacles*, and a simple lens was used by Malpighi and also by Loeuwenhock. It was Zacharias Jansen a *spectacle-maker* of Middelburg in Holland, who, about the year 1609 accidentally discovered the *principle of the telescope and microscope* by placing two lenses together in a tube. Galileo turned this invention to practical use, but the instrument remained merely a toy for some years."

(13) In November 1946 I had some correspondence about the history of spectacles with my friend Mr. A. N. Gulati, M.Sc. of the Technological Laboratory (Matunga, Bombay). I record here gratefully the following notes from Mr. Gulati's letters:—

(1) *Dr. G. M. Findlay* has published an article on "*the Debt of Medicine to Microscopy*" in the *Journal of the Royal Microscopical Society*, March and June 1940, pp. 36-40. Dr. Findlay's observations are as follows:—

(a) "*Lenses* were first used even if they were not primarily invented, for a purely medical purpose—to overcome myopia.

(b) *Roger Bacon* (A. D. 1214-94) suggested the use of such glasses for aiding defective vision. His suggestion was quickly put into effect for *Bernard de Gordon* during his residence as a physician at Montpellier from 1285-1307 refers to *Spectacles as oculus berellinus*.

Findlay refers to magnifying segments of glass spheres which were known to Arabian Physicist *Alhasan* of Basra (965-1038 A. D.)

(11) In an article entitled "*Our Racial Superiority*" by Ethel J. Alpenfel published in the *Reader's Digest* (September 1946) the author quotes T. T. Waterman (*Essays on Anthropology*,

University of California Press, 1936) as having pointed out that *we are indebted to the Chinese for spectacles* too among thing like *porcelain, gun-powder, printing press, mariner's compass* and paper money.

(III) *Seneca*, the tutor of Nero, the Roman Emperor knew the magnifying power of hollow glass-sphere filled with water.

(IV) The earliest lens found so far is from the ruins of the Palace of Nimrod of the City of Babel.

(14) Another friend Dr. H. Goetz, Curator, Baroda Museum and Picture Gallery reported to me on 10-11-1946 that in the *Jahangir Album* published by Dr. Goetz and Dr. Kuhnelt, *an artist of Akbar's later reign* is reproduced *wearing spectacles*. Subsequently on 23-11-1946 Dr. Goetz sent to me a photo of the picture of Akbar's painter wearing spectacles. I have great pleasure in recording here my best thanks to Dr. Goetz not only for the trouble taken by him in this matter but also for his appreciation of many of my research papers bearing on the history of Indian culture and allied subjects.

13. HISTORY OF TIN-COATING OF METALLIC UTENSILS IN INDIA

(Between A. D. 1300 and 1900)*

Side by side with my studies in Indian dietetics I have been trying to study the history of Indian cooking utensils and other domestic vessels used in Indian homes. In this connection I was told by many friends that the practice of tin-coating (*kalhāi*) of copper and brass vessels and plates is now current in many parts of India. Copper and brass vessels are subject to chemical action caused by sour or acid food placed in them. This action is lessened, if not prevented, by the *tin-coating* applied to the vessels. Persons who have made *tin-coating* a profession are called Kalhaiwallas.¹ Some of these have regular shops in cities, while others move about from house to house, doing the work of *tin-coating* on the spot with the help of instruments and materials which they carry with them. The rate for tinning vessels of ordinary size is generally quoted for 100 vessels of assorted size.²

I have not come across any Sanskrit word for kalhāi but Prof. K. P. Kulkarni in his Marathi Etymological Dictionary (*Marathi Vyutpattiakoṣa*, Bombay, 1946) p. 146 makes the following entry about kalhāi:—kalhāi = kathilācā mulāmā, etc.

—Tinning, the wash of tin given to culinary utensils.

Can any Sanskrit or Prakrit scholar prove historically the connection of the *Arabic* Kalhāi with *Sanskrit* kaladhautā and *Prakrit* Kalahoya as suggested by Prof. Kulkarni? On p. 133 of his Dictionary, Prof. Kulkarni makes another entry for kathil (= *Tin*).

The Marathi Dictionary *Śabdakoṣa* by Date and Karve (p. 629 of Vol. II) derives the word kalhāi from Arabic kalhāi = Kathil and records a usage of the word from Rajwade's *Sources of Maratha History* (in Marathi) Khaṇḍa 12, No. 142.

In this usage the word Kalhāi does not mean tin-coating but the coating of mercury (pārā) applied to mirrors. The *Śabdakoṣa* records the words: Kalhāikar or Kalhālgār for persons who carry on the

* Prof. C. S. Srinivasachari 61st Birthday Celebration Volume, pp. 93-97.

1. The *Bombay Gazetteer* contains notes on kalaigar, a caste of Muslim tin-smiths, in the districts of Ahmednagar, Poona, Satara, Sholapur, Belgaum, Dharwar, Bijapur and Nasik—See Index to the *Bombay Gazetteer*, Bombay, 1904 (p. 180).

2. In the article on Caley in the *Hobson-Jobson* (by Yule and Burnell, London, 1903, pages 145-146) there are references to *Tin* from c. A. D. 920 to 1795 but they don't mention tin-coating. The names for *Tin* mentioned in these references are:—al-halaf, calam, calaim, calayn, calam, calaim, calaym, calaim, kalim, calim.

profession of *tin-coating* of domestic utensils. It also records the word *kathil* (p. 572) and connects it with Sanskrit *Kastira* and *Apsbhraṣṭa* *Katthila* (= *Kalhil*).

The *Rājadharmakośa* (C.A.D. 1676) (Poona, 1880) records the words *kathila* and *kalhalkara* as follows :—

Page 5—*kathilam vaṅgamucyate*

Page 31—*kalhalkaraḥ Śisakāro* (sl. 378).

I cannot say why *kalhalkara* is called *śisakāra* in the above line. Perhaps the *Kalhalvālas* of Shivaji's time not only practised the art of *tin-coating* but of *lead-coating* also.

The lexicon *Pārasībhāṣānūlāsana* (a lexicon of Persian terms) of Vikramasimha (*Before Samvat* 1600, i.e. A.D. 1544, according to the editor Dr. Banarasidas Jain) was published in 1545. In this lexicon I find the word *kalaiya* (*tin*) mentioned in verse 4 of *Prakaraga* II (Page 13).

This is the earliest reference to the word *kalaiya* traced by me in Indian sources. However the word means *tin* and not *tin-coating* with the history of which I am concerned in this paper.

The reference to "*Kalhaihara*" (the person who practised the art of *tin-coating*) in the *Rājavyavahāraśloka* proves clearly how *tin-coating* had become current in India in the 17th century. To support this conclusion we get the following additional evidence of Sanskrit and non-Sanskrit sources :—

The *Śivatattvārātmākara*, an encyclopaedic cultural Sanskrit metrical work by Keladi Basava, king of Ikkeri (A.D. 1698-1715), was published by B. M. Nath & Co. at Madras in 1927. This work mentions "*Kalāya-lepa*" or *tin-coating* in the chapter on *sūpatāstra* (cookery)—*Kallola V I, Taraṅga 18, Verse 13* :—

Page 235—*Kalāya-lepīte pātre* etc.

The use of a utensil with *tin-coating* for cooking purposes is clearly laid down in this verse. The word "*Kalaya*" used in the verse is not a Sanskrit word but it is an Arabic word for *tin* slightly Sanskritized by Keladi Basava.

The Hindi poet Sūrdās refers to *Kalai* as I am informed by my linguist friend Dr. Siddheswar Varma⁴ of Nagpur in his letter of 26-8-49 which reads as follows :—

3. The word *kathil* is recorded by Raghuntha Paṇḍita in his *Rājavyavahāraśloka* (C.A.D. 1676) Poona, 1880, p. 5, where some words for metals are given as follows —

"*Raṅgyam rīpa*.....

"*Kathilam vaṅgamucyate*"

The Marathi poet Moropant (A.D. 17,9-1794) mentions *kathil* in his *Bhīsmoparṇa*, 11-47 (quoted on p. 572 of *Sabda-Kośa* by Dye and Karve, Poona, Vol. II, 1933).

"Regarding *Kalhai* the only material immediately available is a line from *Sūrdās*, quoted by *Hindi Śabda Śāgar*, Vol. I (1916), sub voce *kalai*. The line stands as follows :—

"*Āi udhari prīti kalai* etc."

The lexicon renders *kalai* as *rangā* which Bhargava's *Standard Illustrated Dictionary of the Hindee language* renders as "tin", while it renders *kalai* as thin coat of tin on an object."

Abul Fazl makes detailed remarks in his *Ain-i-Akbari* (c.A.D. 1590) on the kitchen of Emperor Akbar (pages 49-51 of Gladwin's Eng. Transl. Vol. I, Calcutta, 1897). Food was served at Akbar's table in dishes of gold, silver, stone, copper and china. Tin-coating of copper utensils in the kitchen is referred to in the following concluding para of the remarks on the kitchen (p. 51) :—

"The copper utensils for His Majesty's use are tinned twice in a month and those of the princes and the Harem only once in that time. Whatever copper utensils are broken, are given to the braziers, who make new ones."

In the seventeenth century the East India Company carried on regular sale of tin through their agents in India as vouched by the following contemporary references :—

- (1) *John Marshall in India* (A.D. 1668-1672) Oxford, 1927, p. 22—
"selling of a consignment of tin."
- (2) *Supplementary Calendar to India Office Documents* by Sir William Foster (A.D. 1600-1640), London 1928.
December 1614—Notes on the trade at Surat—commodities in demand include "guns (a few tin)" etc.

P. 69—A.D. 1616—Tin a profitable commodity.

P. 141—tin taken to Persia.

P. 104—A.D. 1616—tin of Pilak (Perak) better than English tin.

In the seventeenth century a vast quantity of English tin was consumed in parts of Asia and also Persia and Arabia, where tin-coating of dishes was current as vouched by Tavernier in the following extract :—

"The money of the king of Cheda (a port upon the Malaya coast, 45 miles south of Junk Seilon) and Pers. This money is of tin..... Formerly the English brought it (tin) out of England and furnished great part of Asia where they consumed a vast quantity; they carried it also into Persia and Arabia; for all their dishes are of copper, which

4. I take this opportunity for expressing my deep sense of gratitude to Dr. Varne not only for this reference but for his constant and prompt replies to my queries pertaining to my studies.

they cause to be *tinned every month*." [This extract is quoted in footnote 3 on p. 281 of *Countries round Bay of Bengal* (A.D. 1679) by Thomas Bowrey (Hakluyt Society, Cambridge, 1905)—*Tavernier*, Vol. I Part ii, p. 6].

Tavernier further refers to the use of *tin* for *tinning* cooking utensils, etc., in the following extract on pages 162-163 of his *Travels* (Vol. II, London, 1889, Chap. XXV):—

"Some years ago very rich mines of *tin* were discovered at *Dalgore*, *Sangore*, *Bordelon*, and *Bata*; this has done some injury to the English, because there is no longer need of their *tin* as formerly, sufficient being now produced in Asia. *Tin is only used in this country to tin cooking pots, kettles, and other copper utensils.*"

In our search for the history of *tin-coating* in India we have gone up to about A.D. 1500 on the strength of literary evidence recorded above. This literary evidence is further corroborated by archaeological evidence, viz., the discovery of a *copper* container with *tin-coating* both on its interior and exterior found at Kolhapur (in the excavations at *Brahmapuri*). I am thankful to my friends Dr. H. D. Sankalia and Dr. M. G. Dikshit for drawing my attention to this *tinned* container. Dr. M. G. Dikshit, Curator of the Deccan College Post-Graduate and Research Institute, sent to me on 26th September 1949 the following particulars about the *tinned* container found at Brahmpuri:—

(1) A photograph of (A) a copper bowl and (B) a *copper container*...The copper bowl is not tinned but the *copper container has a coating of tin both on its interior and exterior.*

(2) According to Dr. Dikshit both the above vessels are associated with *Bahmani* coins and therefore, belong to the *Bahmani* period (A.D. 1347-1500).

(3) The *tinned copper container* has been described on p. 7 of the *Marathi Guide to the excavated Finds from Brahmapuri*, an exhibition of which was held at the Deccan College Research Institute on 25th January 1948.

The foregoing archaeological evidence is very important for the present inquiry as it takes the history of *tin-coating* of copper utensils in India up to c.A.D. 1300. The practice of giving a *tin-coating* to both the interior and exterior of a copper or a brass vessel is typically a Muslim practice current even to-day. Non-Muslims, however, and especially the Hindus, give tin-coating only to the interior of a vessel, perhaps on economic grounds. The use of solid tin-vessels (instead of tin-coated vessels) now current in some parts of India appears to have been current in India prior to the advent of the practice of tin-coating picked up from the Muslims. This presumption is warranted by the

following reference to dining-plates of *gold, silver, copper, bronze, clay, tin* and *lead* quoted from Bodhāyana by Vidyāraṇya or Sāyaṇa (C.A.D. 1375) :—

Vidyāraṇya quotes the following verses from Bodhāyana in his *Yāgyavalkyaśrautāsana* (*Vidyāraṇya prakāraṇa*)— p. 159 of Adyar Edition, 1935, with English translation :—

“Svayamāhṛtaparṇeṣu.....
.....trapu-sīsayoh”

(Eng. Translation on p. 216)—

“He (ascetic) should eat on leaves plucked with his own hands or serene ones shed of their own accord, but never use the leaf of the Banyan or the holy fig or the karañja. Even when reduced to the narrowest straits should he never eat off a *bronze* plate—for, one eating off a *bronze* plate verily eats filth, nor off a plate of *gold, silver, copper, clay, tin* or *lead*.—”

If the above quotation is traced in the works of *Bodhāyana* (C. 250 B.C.), the author of the *Dharmasūtra* which goes by his name, the antiquity of solid tin-vessels for more than 2000 years would be conclusively proved. As the quotation stands at present it is earlier than A.D. 1300, i.e. prior to the history of tin-coating recorded in this paper. A study of the antiquity of *trapu* (tin) and its several uses in Indian cultural history needs to be undertaken by some scholar interested in the problem.

In concluding this paper I have to request my readers to record some references to tin-coating in Sanskrit and non-Sanskrit sources prior to A.D. 1300. In this connection I record most gratefully the remarks of my friend Shri K. N. Dave of Nagpur communicated to me on 31-8-1949 through Dr. S. Varma :—

“Although *tin* (= *trapu*) was known to Atharvaveda⁵ I have not come across its use for tinning copper or brass pots. On the other hand in the *Mānasollāsa* (C.A.D. 1130), Vol. 2, pp. 116 and 131 refer to grain and meat being cooked in plain copper pans (*sthālit*). Evidently the art of *tinning* was introduced into India by the Muslims. I know of no Sanskrit or Hindi word for the process of *tinning* pots and pans. Hindi “*Kalai Karnā*” is clearly from Arabic “*Calai*”.

5. Sir P. C. Ray in his *History of Hindu Chemistry*, Vol. I (Calcutta 1902), p. 83, points out the metals mentioned in the *White Yajurveda* (XVIII, 13), viz. iron, lead, TIN (*trapu*), gold and silver and in the *Chāndogya Upaniṣad* (iv, 17. 7), viz. gold, silver, TIN (*trapu*), lead (Sisa) and iron. *Sūtrata* (Chap. 38) prescribes the internal use of *tin* (p. 24), as also Vāgbhaṭa (p. 30). The *Rādṛgava* and the *Rāmaratna-saṃhāsa* also deal with *tin* (pp. 40, 62).

14. THE MOSQUITO-NET IN EGYPT (c. B. C. 500)
AND THE MOSQUITO-CURTAIN IN INDIA
(BETWEEN B. C. 500 & A. D. 1800)*

In the *Bodhāyana-Dharmasūtra*, which is assigned by Prof. P.V. Kane to the period—500 B.C. to 200 B.C., rules for the life of a *vidhā-prastha* are laid down. One of these rules prescribes that *he should not kill gnats or mosquitoes (dambha-matshādn)*.¹ This statement clearly proves not only the existence of *gnats or mosquitoes* in Indian forests 2500 years ago but also the dominance of the doctrine of non-violence (*ahimsā*) that was being developed into a fine art at that early period.

Apart from the violent way of dealing with the mosquitoes there is also a non-violent way, viz. the use of the mosquito-curtain, as we use it to-day. Whether such a contrivance was used by ancient Indians in the time of Bodhāyana to protect themselves against the bites of mosquitoes remains to be investigated.

I-tsing in his *Record* (A. D. 671-695) Takakusu's Eng. Trans., Oxford, 1896, Chapter XXII, deals with the *Rules of sleeping and resting* as current among the monks of the Nalanda monastery in Bihar in the 7th Century A. D. He refers to *bed* (each of 2 cubits length = 3 ft.), *chairs, mats, utensils, bed-steeds*² etc. and then observes:—

"There is no such custom as screening one's bed with a cloth (as in China). For if a man is unfit to sleep in the same apartment with others, he should not do so. And if all are equally qualified why

* *Bhāratīya Vidyā*, VIII, pp. 275-288.

1. Vide p. 313 of *Bodhāyanadharmasūtra* (Mysore, 1907) III, lii, 19.

न दुष्टोऽप्यच्छान् हिमवान् तापसो मवेत् ।

बन्धसिद्धेऽदुष्टद्वारवमैत्रलियः ॥१*॥

The commentator Govindasvāmin explains:—

इजादिकानामपि हिंसां नान्वरेत्, दुष्टत्रिषांसायां वर्तते ।

Appe in his *Sanskrit-English Dictionary* explains दंष्ट्रा: = gad-fly and मच्छकः—
gnat or mosquito.

The word मच्छक is found in the following verse of the *Yogacūṣṭha* (निर्वाण-
मच्छक-उल्लसार्थ-Śarga 59—Page 4795 of the edition published in the *Udayuta
Magazine*, Benares, अष्ट-साषाढ number 1947),

धुरन्धरादि मच्छका बहुसोऽुम्बरायुगे ।

फलानि रसपूर्वाणि धूर्णमानानि मादतैः ॥५०॥

When the fruits of the *Udumbara* tree are ripe swarms of *matakas* hover round them to suck up their sweet juice.

2. See *Callaeogae*, VIII, 1, 4.

should one screen oneself from others? In using the bed which is the possession of the Brotherhood (*Samgha*) one should put *something between the body and the bed*, and it is for this purpose that the *mat (Nishidana)* is used."

In the above passage I-tsing distinguishes between (1) the *cloth screen for the bed* and (2) the *bed-sheet*, which was a *mat* put between the body and the bed. He contrasts the *absence of cloth bed-screens* in the Nalanda monastery with their use in China. It is for Chinese scholars to say if the bed-screens used in China in I-tsing's time were made of nets like our mosquito-curtains. Though the monks may not have used *bed-screens* in the Nalanda monastery it is possible to presume their use by house-holders in India, but we cannot say if these screens were made of cloth netting.⁸

The lexicon *Amarakosa* (between A.D. 500 and 800) records many words pertaining to different textile products⁹ but among these words

1. The *Bhāṣāśāstra* of Varāhamihira (c. A. D. 500) contains a chapter (No. 79) on *bed-steads* etc. (शय्यसिनलक्षण) in 39 verses. No reference to a *mosquito-curtain* is found in this chapter. The chapter deals in detail with the different kinds of timber for the *bed-steads*.
2. Vide p. 191 of I-tsing's *Record* (Arrangement of Affairs after the Death of Monks)—"Things such as *nets* are made into *net-cork* for windows"—"Were these *nets* belonging to monks made of *cloth* or *metal*?"
3. Vide *Amarakosa*, N. S. Press, Bombay 1905, pp. 276-279 *Kāṇḍa* II, *Manuṣya-varga* 6, verses 111-120. I note the textile terms given by *Amara* for ready reference:—

- (१) फाल, कर्पास, बादर—कर्पासवस्त्रस्य (According to Bhānuji Dhṛṣṭi = a)
- (२) कौशेयम्—पीतांबरदेः (a)
- (३) राह्ववम्—ऊर्णादः (a)
- (४) अनाहत, निष्प्रवाणि, तन्मक, नवाम्बर—उद्यमोगक्षान्तरहितवस्त्रस्य (a)
- (५) उद्गमनीयम् धौतवस्त्रयुगास्य (a)
- (६) पत्रोर्णम्, धौतकौशेयम्—धौतकौशेयस्य प्रक्षालितकौशेयस्य (a)
- (७) क्षामम्, दुकूलम्—पद्मवस्त्रस्य (a)
- (८) निवीतम्, प्राकृतम्—प्राकृतवस्त्रस्य (a)
- (९) दशाः, वस्तिः—बच्चान्तावयवानाम् (a)
- (१०) दैर्घ्यम्, व्यायामः—बलादेः दैर्घ्यस्य (a)
- (११) परिणाहः, विशालता—विस्तारस्य, 'पनहा' इति स्थितस्य (a)
- (१२) नफकः, कर्पटः—प्रस्वेदादिमार्जनार्थं—हस्तवस्त्रवस्त्रस्य (a) Napkin
- (१३) वस्त्रं, व्याञ्छादनं, वासस्, चेलं, वसनं, अंशुकं—वस्त्रस्य (a)
- (१४) सुचेलकः, पटः—शोभनवस्त्रस्य (a)
- (१५) वराशिः, स्थूलघाटकः—स्थूलपटस्य (a)—a coarse cloth

I do not find any word for mosquito-curtain as such. Amara mentions three words for curtains, viz. (1) प्रतिसीरा, (2) खनिका, and (3) तिरस्करिणी, but I am not sure if any of these words were in use for mosquito-curtain specifically.

The *Shorter Oxford English Dictionary* (p. 1285) records the word *Mosquito* = a gnat of several different species (A. D. 1583); A. D. 1665—“*Mushito* or Gnats pestered us extremely”. This *Dictionary* further records the words *M. netting*, *M. canopy*, *M. curtain* and *M. NET* (= a net (of lace, gauze etc.) to keep off mosquitoes) but no usages of these words are recorded. It is, therefore, difficult to say at what time mosquito-nets came to be used in England.

In the *Hobson-Jobson* (London, 1903, p. 590) we find an article on *Mosquito* with usages of this word from A. D. 1539 onwards. Among the extracts quoted I do not find any reference to the *mosquito-net* or *curtain*. The only extract in which we find a reference to an attempt made to drive away mosquitoes reads as follows:—

- (१६) निषोमः प्रच्छदपटः—श्रीमन्निवाहरणपटस्य, or श्रीपिधानपटस्य “बुरका” इति ख्यातस्य or “येन दुस्वप्यादि प्रन्नायते तस्य (सीतासामी) (B)
- (१७) राख, कम्बल—कम्बलस्य (B)
- (१८) अन्तरीयं, उपसंभ्यानं परिधानं, अर्धोद्युक्तं—परिधानवस्त्रस्य (B)
- (१९) प्रावारः, उत्तरीयः, मुहुरिका, संभ्याने, उत्तरीयं—उपरिवस्त्रस्य (B)
- (२०) बोलः, कृपांसकः—आप्रपदीनकषुकस्य (इ. इ. इत्याख्यस्य—*Kisrateāmi*) (B)
- (२१) नीषारः—प्रावरणस्य (B)
- (२२) अर्पोरुं, कच्छातर्कं—“छाङ्गा” इति ख्यातस्य (of Marathi परकर) (B)
- (२३) आप्रपदीनं—प्राप्रपदीनतन्त्रव्यमानवस्त्रस्य (B)
- (२४) बितानं, उमोवः—बितानस्य, “बंदबा” इति ख्यातस्य (B)
- (२५) दुष्पम्—बहुगोहस्य (B)
- (२६) प्रतिसीरा, खनिका (v. l. यमनिका), तिरस्करिणी—व्यवधानपट्याः “कनात” इति ख्यातायाः (B)

1. This article is as follows:—

MOSQUITO—S. A gnats is so-called in the tropics. The word is Spanish and Port. (dim. of *mosca*, a fly) and probably came into familiar English use from the East Indies, though the earlier quotations show that it was first brought from S. America. A friend annotates here: “Arctic mosquitoes are worst of all and the Norfolk ones (in Broad) beat Calcutta!”

It is related of a young Scotch lady of a former generation, who on her voyage to India had heard formidable but vague accounts of this terror of the night, that on seeing an elephant for the first time, she asked: “Will you be what is called a *Mosquetade*?”

Usages—A. D. 1539 (*mosquitos*), 1582 (*mushitos*), 1584 (*mushitas*), 1616 1673 (see article on *chints*), 1662 (*muscieten*), 1673 (*Mosquito*), 1690 (*Mushitos*) 1740 (*Muscetars*), 1764 (*Mosquitos*), 1883 (*Mosquito*).

A. D. 1690—"The Governor carries along with him a *Peon* or servant to fan him, and drive away the busie flies and troublesome *Musketoes*. This is done with the Hair of a Horse's Tail"

—Ovington, 227-28.

The Marathi Dictionary *Śabdakōṭa* (by Karve and Date, p. 2402) records the "मच्छरदानी (नी)" for mosquito-curtain but does not record any usage of this word. Similarly the *Vyutpattikōṣa*¹ (by K. P. Kulkarni, Bombay, 1946) records the words मच्छर (mosquito) and मच्छरदानी (mosquito-curtain) without any usages.

In the article on *Mosquito* in the *Encyclopaedia Britannica*² no historical information either about *mosquito* or *mosquito-curtain* is recorded. Among the *control measures* against mosquitoes the following are mentioned :—

- (i) "Living in mosquito-proof dwellings or by utilizing *mosquito-curtains* while sleeping."
- (ii) applying certain substances to exposed parts.

The use of mosquito curtains and the application of certain substances to exposed parts need not be looked upon as a modern invention. They were already known to the ancient Egyptians about B.C. 500, if not earlier, as will be seen from the evidence to be recorded in this paper.

In the *Mānasollāsa*³ of King Someśvara (c. A. D. 1130) there is a chapter on King's *beds* (शय्याभोग) which describes the different kinds of beds and their accessories. No reference to "*mosquito-curtain*" is found in this otherwise very informative chapter.

The *Śabdakalpadruma* (Vol. III, Calcutta, p. 648) refers to mosquito-curtain in the following entries :—

"मशहरीः स्त्री. (मशं मशकं हरतीति । इ- "हरतेरनुष्मनेऽच्" ३।२।९ । इति मच् ।
स्त्रियां षीप् ।) मशकनिवारकप्रावरणविशेषः । मशहरी इति भाषा ॥
चतुष्की २ । इति जटाधरः ॥

1. Vide p. 574 of *Vyutpattikōṣa*—

मच्छर. न चावणारा वारीक कीटक. A mosquito or gnat

[सं. मशकः, मत्सरः; पा. मच्छरो; प्रा. मच्छर, मच्छल;

लां. मच्छक; सि. मच्छद; का. मच्छरदानी = विछन्नावरीत दासाचि प्रतिबंधक आवरण;
शाक्यम मच्छरू (सं. मत्सर; प्रा. मच्छर) हा शब्द निराळा]

2. Vide pp. 845-846 of Vol. XV (14th Edition, 1929).

3. Vide pp. 142-144 of *Mānosollāsa* (G. O. Series, Baroda, Vol. II).

From the above entries we get two words in Sanskrit, viz. (1) मसहरी and (2) षतुष्की for the mosquito-curtain. About षतुष्की we get the following entry in the *Sabdakalpadrūma* (Vol. II, p. 422) :—

“ षतुष्की—मसहरी । मसहारि इति भाषा ॥
पुष्करिणीयेः । इति श्रेयिनी । के । ८७ ॥”

Medini (Calcutta, 1872, p. 10—कनिकम्) mentions both the words षतुष्की and मसहरी for mosquito-curtain as follows :—

‘ षतुष्की मसकहर्णां पुष्करिण्यन्तरेऽपि च ।’

As *Medini* is assigned by me to the period—A. D. 1200–1275¹ and as he refers to षतुष्की in the sense of मसकहरी (mosquito-curtain) we may conclude that some sort of contrivance for protection against mosquitoes was current in India about :00 years ago, if not earlier. The lexicon *Vitvāprakhāsa* (A. D. 1111) also refers to षतुष्की (Vide p. 17 of Benares Edition of 1911) as follows :—

“ षतुष्की मसकेहर्णां षतुष्की बहिकाण्ठे ॥”

The lexicon *Vitvālocanakośa*² by the Jaina author Śrīdharasena (between A. D. 1300 and 1400) is possibly copying the earlier lexicons in the following line (p. 14 of the N. S. Press Edition, 1912) :—

“ षतुष्की मसकहर्णां बहिका वेहमनेर्षोः ।”

The editor explains the word षतुष्की in Hindi as follows :—

“ षतुष्की—मसैरी रङ्गपर छाननेकी

—छत्री

—एकप्रकारका परपर (छी.)”

The lexicon *Vaijyanti* (c. A. D. 1050) is the earliest lexicon so far discovered by me to refer to षतुष्की (mosquito-curtain) in the following verse (p. 168 of G. Oppert's Edition, Madras, 1893) :—

“ मसकहरी तु षतुष्की शिरसि सिगुष्कीपमञ्ची स्यात् ।

काम्बपटस्सपात्पटी प्रतिसारा २ बचनिका तिरस्करिणी ॥ १२७ ॥”

1. Vide my article on the *Date of Medini* in *New Indian Antiquary*, Vol. VII, pp. 171-175.

2. Vide my article on the *Date of the Vitvālocanakośa* in *Karnatak Historical Review*, Vol. III, pp. 15-20.

3. Cf. *Rājavyākārokośa* (C. A. D. 1676) by Raghunātha Paṇḍita (Poona, 1880, p. 10) verse 106-107) :—

“ वददा स्याच्चमिका काठं काम्बपटं विदुः ॥ १०६ ॥

प्रतिवीरा सिराचा स्यात् कलत्रो मध्यमम्बपः ।”

This glossary records terms about dress (verses 56-76) such as :—

मुंघाले, झगा, मंदोल, फमरैदा, विमार, चादर, दद्रु, डगला, फट्, कुहती, पिरमा, पमोरार, छल्लकी, भ्याला, फिनारा, तस्वी, नग्दी, पटेदार, मर्जरी, कर्मपोस्तनी, छाल, तोष, दुर्मा, लकलाद्, मकम्ब, लफ्सा, बोनेरीनिलम्ब, स्पेरीनिलम्ब, छोट, मुटेदारनिलम्ब, चिचंदोजी, छाला, खिसा, बुफ्टा, पासोनी,

Oppert explains चतुष्की "mosquito-curtain" in the Index of words at the end of his edition of the *Vaijayanti* of Yādavaprakāśa. *Vaijayanti's* reference to चतुष्की is very important for the following reasons:—

(a) *Vaijayanti* (C.A.D. 1050) mentions चतुष्की and मशकहरी among terms about costume or more broadly among textile products. We are, therefore, warranted in understanding चतुष्की as a textile accessory.

(b) *Vaijayanti* further mentions चतुष्की and मशकहरी as distinct from प्रतिसारा, यवनिहा, and तिरस्करिणी which are mentioned by Amara. प्रतिसारा of *Vaijayanti* is obviously identical with प्रतिसारा of Amara.

The lexicon *Nānārthārṇava-Saṁkṣepa* of Keśavasvāmin is assigned to 12th or 13th Century A.D.¹ In this work we find a reference to चतुष्की, which is explained as a kind of यवनिहा or curtain. We are further told that मशकहरी was used by the rich (आज्यानाम्) according to the lexicographer अजय. The pertinent verse reads as follows on p. III of *Nānārthārṇava-Saṁkṣepa* (ed. by Gaṇapati Śāstri, Trivandrum, 1913):—

“इत्ययं चो चतुष्की स्यात् ख्याते यवनिहास्तरे ।

आज्यानां मशकहरी त्यज्यस्वयाह शब्दविद्” ॥ ७३१ ॥

--(Kāṇḍa II—मशकहरी-आजाधिप्राप्याच)

If the lexicographer अजय mentioned by Keśavasvāmin is identical with अजयपाठ, who is quoted by Sarvānanda (A.D. 1159) and by the author of *Gaṇapatnamahodadhi* (A.D. 1140)² we may safely infer that the use of the mosquito-curtain (मशकहरी) was confined to the rich (आज्यानाम्) somewhat earlier than A.D. 1100. Accordingly we get a reference to चतुष्की in the *Vaijayanti* of Yādava-prakāśa (C.A.D. 1050). Evidently in the time of *Vaijayanti* the use of the Mosquito-curtain may not have been very common. It must have been confined to the rich only as expressly stated by अजय.

In the *Śabdaratnasamanvaya* composed by king Śāhaji of Tanjore (A.D. 1683-1711) we find the word चतुष्की used to indicate (1) mosquito-curtain

शाही, तोरुबंद, चोकी, पाटावू, मुकटा, गोस्पेच, दुस्ता, फगोल, बुदखा, तोसदान, संरुद, सामर, बुजारा, तमावा, सखर्दन, बैतणी, गमगम्, तूल, अर्जे, अर्धगम्, तस्, फेरा, पुस्त, जेहेपटी, वस्तनी, डटा, मोहल, खपवा, दौर, रावण, तल्ता, क्वा, चीन, नेका, मोठा, बारिक, नरम, पलंगपोस, नमीना, फरव, पस्नी, सोखता, बसला.

Many of these terms are current in the Marathi Language at present.

1. Vide p. XXXIX of Intro. to *Kalpadrakṣa* by Rāmāyaṅra Śarmā (Vol. I, G. O. Series, Baroda, 1928).

2. *Ibid.*, pp. XXIX-XXX.

मसकहरी and (2) *fishing-net* (मसकहरी)¹ as will be seen from the following verse (p. 15 of *सम्प्रदायसंग्रह*, G.O. Series, Baroda, 1932):—

“अनुष्ठी मसकहरीं अनुष्ठी वटिकाभरे ।
अनुष्ठी मसकहरीयां स्वात् पुष्करिन्धरेऽपि च ॥”

I have so far recorded the evidence of lexicons to prove the existence in India of अनुष्ठी or मसकहरी, which appears to have been some rectangular contrivance of cloth-curtains used for keeping away mosquitoes. Perhaps it was a net like our modern *mosquito-net*. This surmise can be allowed in view of the use of the word अनुष्ठी to indicate a *fishing net* (“अनुष्ठी मसकहरीयां स्वात्”) recorded in the *Sabdaratnasamanvaya* lexicon of the 17th Century.

In view of the testimony about अनुष्ठी or मसकहरी from A.D. 1000 onwards found continuously in lexicons we must try to find out the usages of these terms for a mosquito-curtain in literary compositions. I hope that scholars interested in the cultural history of India will help me in tracing such usages in course of time not only in texts composed after A.D. 1000 but even before A.D. 1000.

As regards the *history of the mosquito-curtain in India before A.D. 1000*, I note below the following reference noticed by me on p. 501 of the *English Translation of Mānasāra* by P. K. Acharya (Footnote 1):—

“Carpets, rugs, pillows, and curtains etc. are also mentioned... (*Mahāvagga* V, 10-3); pillows of the size of man's head and body; bolsters are of five kinds as stuffed with wool, cotton, bark, grass; leaves; floor-cloth, MOSQUITO-CURTAIN², handkerchief, spittoon, are also mentioned.”

The reference to *mosquito curtain* mentioned above has been traced by me in the Translation of *Cullavagga* (V, 13,3) by Rhys Davids and Oldenberg. The original word for this contrivance against mosquitoes is “*mahasakujikā*” (Sansk. मसककुटिका, explained by the commentator *Buddhaghosa* (c.A.D. 425) as *Civaya-Kujikā* (वीषर-कुटिका) i.e., a hut, the

1. The ancient Egyptians (C. B. C. 500) used *nets* for fishing by day and for keeping away mosquitoes from their beds at night, as vouched by *Herodotus* (pp. 153-154 of Book II of *Herodotus*, edited by Rawlinson, London, 1875). *Herodotus*, the Greek historian and the father of history, was born at Halicarnassus, a Doric colony in Caria in B. C. 484. He spent some time in Egypt. Whenever he speaks from his own observations, he is a real model of truthfulness and accuracy. The best English Translation of *Herodotus* is by Rawlinson reprinted in *Everyman's Library* (1910)—See p. 261 of *Smith's Smaller Classical Dictionary*.

2. Vide p. 102 of *Cullavagga* (S. B. E. Vol, XX, 1885) V, 13, 3 (On the *Daily Life of the Bhikkhus*):—

“Now at that time (while engaged in building) the *Bhikkhus* were troubled with mosquitoes.

They told this matter to the Blessed One.

“I allow, O *Bhikkhus*, the use of MOSQUITO CURTAINS”

* Footnote 4—“मसक-कुटिका ति वीषरकुटिका” (पुद्गलोप) Literally a ‘mosquito-net’ the walls of which are to be of cloth.”

walls of which are to be of cloth. This is evidently the *Catupki* (कतुप्की) or *Majakahari* (मजाकहरी) referred to in Sanskrit lexicons from c.A.D. 1000 onwards as we have seen above.

The *Cullavagga*¹ also refers to the use of *fans* against mosquitoes which is also mentioned in early texts like the *Suśrutasaṃhitā*. In the *Suśrutasaṃhitā* (N. S. Press, Bombay, 1938, p. 490) we find a reference to the use of soft *bed* and seat while taking rest, in *verse* 81 of the *Cikitsāsthāna* as follows :—

“अमानिलहरं वृष्यं पुष्टिनिद्राप्रतिप्रदम् ।
सुखं वाय्यासनं दुःखं विपरीतगुणं मतम्” ॥८१॥

Dallaṅga explains :—

“सुखं वाय्यासनं विस्तृतमासीनं मृदुगण्डोपधानादियुक्तम्”

Here there is no reference to any bed-screen or curtain to protect the sleeper against flies or mosquitoes. On the contrary in the verse that follows *Suśruta* prescribes the use of *fan* (बालस्पजन) to keep away flies etc. from the bed. This verse reads :—

“बालस्पजनमीत्रस्यं मक्षिकादीन् अपोहति ।
शोषदाहृष्यमस्वेदमूष्णोसो स्पजनानिलः” ॥८२॥

Dallaṅga explains :—

“बालस्पजनं चामराक्यस्पजनम् । स्पजनाभिलः शकृद्वृष्ट-वायुः” ।

The use of *बालस्पजन* or *चामर* (chowrie) for driving away flies etc. referred to by *Suśruta* appears to have had a long continuity. Ovington (A.D. 1690) refers to a Governor carrying with him a Peon to fan him and drive away flies and mosquitoes with the hair of horse's tail (Vide article on MOSQUITO in *Hobson-Jobson* p. 590 of 1903 Edition).

1. Vide *Cullavagga* (V, 23. 1)—pp. 131-132 (S. B. E. XX):—

23. “1. Now at that time a mosquito-fan had come into the possession of the *Samgha*.

They told this matter to the Blessed One.

‘I allow you, O Bhikkhus, the use of mosquito-fans’.

A *cāmara* (a tail of the Bos Gruniens or Tibetan ox mounted on a stick, to be used by an attendant to whisk off flies) had come into the possession of the *Samgha*.

They told this matter to the Blessed One.

‘You are not, O Bhikkhus, to make use of a *cāmara*. Whoever does so shall be guilty of a *dukkhaṇa*. I allow you, O Bhikkhus, three kinds of fly-whisks—those made of bark, those made of *Ustira* grass, and those made of peacock's tails.

It is curious to note that while *Bodhiyana* prohibited the killing of mosquitoes by a *cānapīṭha*, Buddha allowed the use of *मक्षिककुट्टिका* (mosquito-lut) and three kinds of mosquito-fans for the comfort of his Bhikkhus, though he was against the use of a *cāmara* perhaps because it was snappanage of royalty.

At what time *bed-screens* came to be used in India cannot be definitely determined at present. I have proved in this paper the use of *चतुष्पती* or *नवाचदहरी* (mosquito-curtain) from C.A.D. 1050. In this connection I have further to state that King Bhoja (C.A.D. 1050) in his *Yuktikalpataru* refers to a bedstead (संज्ञक) as "सपटद्वारा" (with covers or curtains). Dr. G. P. Majumdar¹ states that "from the expression "सपटद्वारा"....it appears that each bed-stead used to be provided with *curtain poles*". About king's bedstead referred to in the *Yuktikalpataru*, Dr. Majumdar observes (p. 120 of *Some Aspects of Indian Civilization*):—

"The King's bedstead is known as श्रीसर्वभद्रला i.e., conferrer of all good; if it be provided with a covering above it is known as सर्वविधा i.e. bringer of all victories (394-395)."

If bedsteads with *curtains* were known to Bhoja (C.A.D. 1050) it is no wonder that the lexicon *Vaijayanti* (C.A.D. 1050) should refer to *चतुष्पती* or *नवाचदहरी* (mosquito-curtain). The references, however, do not enlighten us about the use of bed curtains or screens² in India prior to A.D. 1000.

Having recorded the evidence of Sanskrit lexicons about the use and continuity of the mosquito-curtain from C.A.D. 1000 onwards, we are now in a position to consider the question: *What is the antiquity of the mosquito-curtain in human civilization?* In this connection I record below the testimony of the Greek historian HERODOTUS³ about

1. Vide p. 121 of *Some Aspects of Indian Civilization*, Calcutta, 1938.

2. At present we use for our doors and windows *chik* curtains made by finely split bamboo laced with twine and often painted on the other side. According to *Hobson-Jobson* (London, 1903, p. 193, article on *CHICK*) these curtains may possibly have come in with the *Mongols* for we find in Kovalefski's *Mongol Dict.* (2174) "Tchik, =Natte." The *Ain* (i, 226) has *Chigh*. *Chicks* are now made in London, as well as imported from China and Japan. *Chicks* are described by Clavijo in the tents of Timour's chief wife (§ CXXVI) A. D. 1404. Further usages of the word are dated A. D. 1616 (Sir T. Roe), 1673 (*Fryer*, 92—"Glass is dear and scarcely purchasable.... Windows.....doors screened with *chicks* or latices), 1810 (*Williamson* "checks"), 1825 (*Heber*—"chesh")

Does the Sanskrit word "द्वारद्वारिणी" indicate any kind of *chik* curtain? The word द्वारद्वारिणी used in *Situpilavadhā* (V, 22) is explained in Apte's *Sanskrit-Eng. Dict.* as "a screen surrounding a tent. Mallinātha explains द्वारद्वारिणी or द्वारद्वारिणी as "द्वार-अधोलम्बि वस्तुसंचारिणी: पटः। 'अपटः काण्डपटी स्यात्' इति वैजयन्ती।" He explains द्वाये: (verse 21) as "पटमण्डपैः". If the काण्डपट was "अधोलम्बि" (hanging down) it was something like the *chik* curtain. Literal meaning of द्वारद्वारिणी is a *curtain of sticks*.

If the *chik* curtains have a Mongol origin as suggested in *Hobson-Jobson*, when were they introduced in India?

..... 3. Vide pp. 152-154 of *History of Herodotus*, Vol. II, ed. by George Rawlinson, London, 1873.—Book II, chapters 94 and 95.

the use of *mosquito-net* by ancient Egyptians. Speaking of the *contrivances against gnats* used by the marshmen of Egypt Herodotus observes :—

"94. The Egyptians who live in the marshes use for the anointing of their bodies an *oil* made from the fruit of *Sillicyprium* (= castor oil) plant *Ricinus Communis*, which is known among them by the name of "Kiki". To obtain this they plant the *Sillicyprium* (which grows wild in Greece) along the banks of the rivers and by the sides of the lakes, where it produces fruit in great abundance, but with a very disagreeable smell. This fruit is gathered, and then bruised and pressed, or else boiled down after roasting: the liquid which comes from it is collected and is found to be unctuous, and as well suited as olive oil for lamps, only that it gives out unpleasant odour.

95. The contrivances which they use against *gnatt*, where with the country swarms, are the following :— In the parts of Egypt above the marshes the inhabitants pass the night upon lofty towers which are of great service, as the gnats are unable to fly to any height on account of the winds. In the marsh country, where there are no towers, *each man possesses a net* instead. *By day it serves him to catch fish, while at night he spreads it over the bed in which he is to rest, and*

1. Videp. 300 of *Flowering Plants of Western India* by A. K. Nairne London, 1894.—Castor-oil (*arandi*) is probably indigenous in Africa. The *Carakamhita* (*Sūtrānkhya*, Ch. 27, verse 289) records the properties of *Castor-oil* (देरुवहतेल) as follows:—

देरुवहतेलं मधुरं सुदुष्प्रेम्भाभिरर्षभन् ।

वातसुग्गुल्महृद्दोग्गोर्णैश्चहरं परम् ॥२८९॥

The *Sūtratamhita* (*Sūtrānkhya*, ch. 45) refers to castor oil as follows :—

देरुवहतेलं मधुसुष्णं तीक्ष्णं दीपनं कटु कषायानुरसं सूक्ष्मं स्नेहोविशोधनं श्लथ्यं दृष्यं मधुरविपाकं क्षन्त्यासनं योनिशुद्धिशोधनमारोग्यमेधाकान्तिस्मृतिबलकरं वातकफहृत्स्यधोभागदोषहरं च ॥११४॥

2. I may here record the replies received by me from friends in response to my inquiry about the mosquito-net in different parts of India :—

Sbri A. S. P. Ayyar, M.A., L.C.S. (District and Sessions Judge, Vellore, South India) writes on 8-11-1947 :—

"As for mosquito-curtain, the *Tamils* never heard of it till the Britisher came round. They used to cover themselves thoroughly, including their bed-sheets, in terribly malarial regions like Anamalais, and sleep near the fire, which was supposed as Agni Bhagavān, to keep mosquitoes from exceeding the limits! *Ashu* and *Amuric powder* were smeared over the body and were supposed to be a kind of Swaraj D. D. T. powder to keep the pests away, though nobody claimed that this powder killed the pests. A horribly evil-stinking oil, called *poovathu oil*, was also used to ward off the mosquitoes but its smell kept away friends even more than mosquitoes!" P. B.—"*Margosa oil* is a substitute for the *poovathu oil* as Swaraj insecticide lotion! I dare say other parts of India did not have better anti-material remedies!"

Dr. Sedgopal D.S., F.R.I.C., F.R.H.S. of the Benares Hindu University
 written on 10-11-1947

creeping in, goes to sleep underneath. The gnats, which, if he rolls himself up in his dress or in a piece of muslin, are sure to bite through the covering, do not so much as attempt to pass the net."

It is clear from the above evidence of Herodotus that the *mosquito-net* was used by the Egyptians living in marshes. According to Rawlinson "the intimate acquaintance of Herodotus with the inhabitants of the marsh-region is probably owing to the important position occupied by that region in the revolt of Inaros, which the *Athenians whom Herodotus probably accompanied, went to assist.*" In view of this statement we have reason to believe that Herodotus had first-hand knowledge of the marsh-men of Egypt and his reference to the *mosquito nets* used by these men was based on actual observation. Even if we suppose that the reference was based on his friend's report it has sufficient evidential value for our present inquiry.

That the Egyptians prepared very fine nets is vouched by Pliny² the Roman historian (died 79 A.D.). We can, therefore, easily surmise that the *nets* by which Egyptians of the *15th Century B.C.* caught fish by day and prevented mosquitoes biting them in their beds at night must have been very fine ones, somewhat like modern mosquito-nets³.

"Regarding mosquito-curtains in India I have no specific information. But one thing I know of interest in this connection is that a mixture of the *fixed oil of rosewood* and an essential oil mixture of *Citronella and Eucalyptus* is a well known and popular remedy in the form of a liquid salve to keep away mosquitoes from attacking any part of the body when applied with it. This recipe is being handed down from generation even to the most cut-off and illiterate people in *South India, Ceylon and Annam* etc. where the mosquito trouble is maximum and where these constituents of the recipe are also available from mother Nature. Personally I feel that the innovation of the mosquito-curtain is a later development."

1. Vide footnote 6 on p. 152 of Rawlinson's *Herodotus* Vol. II.

2. Ibid p. 64, foot note by Rawlinson on the texture of Egyptian linen, which was the finest and equal to the finest now made. A piece found near Memphis (in the possession of Rawlinson) was far superior to any of modern manufacture. "It has in the inch 340 threads, or 270 double threads in the warp and 110 in the woof". Pliny (XIX, 1) "mentions four kinds of linen noted in Egypt.... and the same fineness of texture was extended to the *nets of Egypt*, which were so delicate that they could pass through a man's ring, and a single person could carry a sufficient number of them to surround a whole wood. The transparent fineness of the linen dresses of men and women in the Egyptian paintings recalls the remark of Seneca (de Benef. vii, 9) on "*sericas vestes*" so thin that a woman appeared as if naked."

3. Vide footnote 8 on p. 153 of Rawlinson's *Herodotus*, Vol. II. Speaking of the use of lofty towers for sleeping upon Rawlinson states:—

"A similar practice is found in the valley of the Indus. Sir Alexander Burnes in his Memoir on that river" (Geograph. Jour. Vol. iii, p. 113 et seqr), says:— "The people bordering on this part of Indus—between *Bukker* and *Mitun Kot*—lived during the swell in houses elevated eight or ten feet from the ground to avoid the damp and insects which it occasions..... These bungalows are entered by a ladder" (p. 137).

[The custom of sleeping on the flat roofs of their houses is still common in Egypt; and the small tower rising above the roof is found in the representations of some

The evidence about the use of the *mosquito-curtain* so far recorded by me may now be represented chronologically as follows :—

Chronology	Reference
c. B. C. 500	— <i>Herodotus</i> (Born B. C. 484) mentions the use of <i>mosquito-nets</i> used by Egyptians living in marshy regions of Egypt.
c. 250 B. C.	— <i>Cullavagga</i> of <i>Vinayapiṭaka</i> or the Pali canon mentions मकसकुटिका (= महाककुटिका) allowed by Buddha for the Bhikkhus.
c. 425 A. D.	— <i>Buddhaghosa</i> in his commentary on the <i>Cullavagga</i> explains मकसकुटिका as चीपरकुटिका (cloth-but) against mosquitoes.
c. 1050 A. D.	—The lexicon <i>Vaijayanti</i> of Yādavaprakāśa mentions चतुष्की (<i>catuṣki</i>) and महाकहरी (<i>maṣakaharī</i>) in the sense of a mosquito-curtain.
1111 A. D.	— <i>Viśvakosa</i> mentions चतुष्की and महाकहरी.
Before 1140 A. D.	— <i>Ajayakosa</i> states "आज्यानां महाकहरी" i.e. mosquito curtain is for the rich.
Between 1150 } and 1300 A. D. }	—Keśavasvāmin in his <i>Nānārthhārṇava-Saṁkṣepa</i> mentions चतुष्की and महाकहरी (as referred to by अजय lexicographer viz. "आज्यानां महाकहरी")
c. 1250 A. D.	— <i>Medini</i> lexicon mentions चतुष्की and महाकहरी.
Between 1200 } and 1400 A. D. }	— <i>Śrīdharasena</i> in his <i>Viśvalocanakośa</i> mentions चतुष्की and महाकहरी.
1683-1711 A. D.	—King Shahaji of Tanjore mentions चतुष्की and महाकहरी as synonyms. He also mentions चतुष्की in the sense of a fishing net (मत्स्यहारी)

ancient houses in the sculptures. The common fishing net would be a very inefficient protection against the gnats of modern Egypt, through a net doubled will often exclude flies—

चतुष्की" reply to my inquiry about the use of the mosquito curtain in ancient Rome or its representations in Indian or Muslim paintings Dr. Goetz, Curator, Baroda Museum and Art Gallery, writes on 1.11.1947 :—

"I cannot trace any Indian or Muslim representation of it. Whether it was used in the Mediterranean area outside Egypt, I cannot say. The depopulation of the vast areas of the Roman Empire, even of the Campania around Rome, by Malaria in imperial times speaks against the probability of its use. The connection between Malaria (bad air) and the mosquito is a discovery of the last century".

It will be clear from the above table that the *mosquito-curtain* of some sort was known to Indians say from B. C. 500 onwards. Its use may not have been very common and was possibly confined to the rich class of society. Ancient Indians were not behind their confreres in Egypt in devising a contrivance against mosquitoes some centuries before the Christian era. The impression of some of my friends that the mosquito-net (or curtain) is a modern contrivance is contradicted by the evidence recorded in this paper. We must now try to get more literary references to the mosquito-curtain in Indian sources and I hope that Indologists in India and outside will record such references if they feel interested in this problem of great cultural interest.

15. NOTES ON THE HISTORY OF ROPE- MANUFACTURE IN INDIA

(BETWEEN B. C. 300 & A. D. 1900)*

In the article on *COIR* in the *Hobson-Jobson* by Yule and Burnell (London, 1903, pp. 233-234) we get the following information :-

- (1) *Coir* means the fibre of the coco-nut husk from which rope is made.
- (2) Both the *fibre* and the *rope* appear to have been exported to Europe in the middle of the 16th century.
- (3) The Arabic word for *coir* used by early writers is *Kānbār* or *Kanbār*. The Portuguese adopted the word in the form *Cairo*. The form *coir* seems to have been introduced by the English in the 18th century.
- (4) References to coir in datable sources are as follows :-

C.A.D. 1030—*Al-Birūni* explains "*Kanbār*" as the "Cord plaited from the fibre of the coco-tree with which they stitch their ships together."

C.A.D. 1346—*Kanbar* is "the fibrous husk of the coco-nut—Planks of ships are stitched together by the twine made from it—Cordage from it is exported to *China, India* and *Yemen*—*Ibn Batuta* iv, 121.

A.D. 1510 — "*Coir*" used by Governor *Albuquerque* for the preparation of cables and rigging for the whole fleet—trade of *coir* in Maldiv Islands.—*Correa*, ii, 129-30.

A.D. 1516 — "*Cayro*"—Cordage of palm trees—*Barbosa*, 4.16.

C.A.D. 1530—"Coir" (*Correa*, by Stanley, 133).

A.D. 1553 — "*Cairo*" used in place of nails in ship-building—*De Barros*

A.D. 1563 — "*Cairo*" cord used for rigging of vessels. —*Gracia* f.67 v.

A.D. 1582—"Cairo" used for ships instead of nails. —*Castaneda*.

A.D. 1610 — "*Cairo*" = Cord of coco-tree. —*Pyrard de Laval*.

A.D. 1673 — "*Cair-yarn*" made of the cocoe. —*Fryer*, 121

C.A.D. 1690—"Cairo" —*Rumphius*, i, 7.

* *Prin. Karmarkar Commemoration Vol. pp. 19-30.*

A.D. 1727 — "Coyar" Cordage for shipping. —A. Hamilton.

A.D. 1773 — "Kair" yarns —Ioss,457.

All these references to *Coir* from c.A.D. 1030 to 1773 refer to *Coir ropes* used for ship-building purposes. At what time the use of *Coir ropes* for ship-building purposes commenced in India needs to be proved by historical evidence. In this connection I have to invite the attention of readers to the specimens of *coir rope* discovered at Arikamedu (Vide p. 104 of *Ancient India* No. 2, July 1946). Arikamedu was an Indo-Roman Trading Station in "late 1st century B.C. or early 1st century A.D. In the excavations at this place some parts of coir rope of this period have been found. These are described as follows in the detailed article on Arikamedu in the above issue of "*Ancient India*."

- (1) "pieces of palm-shell and rope all in the pre-Arretine layers (the first century B.C. or early 1st cent. A.D.)",
- (2) "of the numerous pieces of rope the longest' had a length of about 9 inches and a diameter of about one inch. Like all other pieces it was made of three strands of coconut twisted together."

In view of these specimens of *Coir rope* found at an Indo-Roman trading Station it is possible to suppose that they were used for shipping purposes about 2000 years ago. The *Coir ropes* found at Arikamedu appear to be very small as compared with the rope used for controlling an elephant described in the *Mānasollāsa*, (c.A.D. 1130) of king Someshvara (Vide p. 48 of *Mānasollāsa*, Vol. I., G. O. Series, Baroda, 1925). The verse describing this rope is as follows:—

“ मासिकेयानेनोद्भूतवस्त्रकस्त्रिंशत्पादकम् ।
षट्त्रिंशत्पादु (ष) तं स्त्रीभ्ये प्रकोष्ठसमतां गच्छ ॥२१३॥”

Here the rope described is that of Coconut fibre, 60 hands long and as big as the forearm (प्रकोष्ठ). A hand is equal to about 1½ ft. The diameter of an average fore-arm would be about 3 inches. The measurements of the rope would, therefore, be (1) about 50 feet length and (2) a diameter of 3 inches. Such a big rope was capable of controlling an elephant as stated in the *śpātibandha* section of the *Mānasollāsa*.

1. A photograph of this longest piece of rope is given in Plate XXXVll. B (Rope, pre-Arretine) in *Ancient India* No. 2 (July 1946).

Before proceeding further I have to record here some interesting information about the *Cocoa-nut* tree (*Coco. Cocoa, Coker-nut*) recorded in the *Hobson-Jobson* (pp. 228-230):—

- (1) The *Cocoa-nut* (tree and nut—Latin *Cocus nucifera* is a palm found in all tropical countries and the only one common to the Old and the New Worlds.
- (2) The etymology of the word is very obscure. Some conjectural origins are given in the passages quoted. The more common etymology is that the word is derived from the Spanish word *Coco* applied to a monkey's or other grotesque face with reference to the base of the shell and its three holes.
- (3) The Persian "*nārgil*" has originated from the Sanskrit *nārikela*.
- (4) Medieval writers generally call the fruit "*Indian Nut*."
- (5) There is no evidence of the *Cocoa-nut* having been known to classical writers nor are we aware of any Greek or Latin mention of it before *Cosmos* (A.D. 545).
- (6) According to *Brugsch*, who describes the Egyptian wall-paintings of c. B.C. 1600 on the temple of Queen *Hasnop*, representing the expeditions by sea which she sent to the Incense Land of *Punt*, the inhabitants of this land lived "*under the shade of cocoa-palms laden with fruit*" [See *History of Egypt*, 2nd ed. i 353 (*Maspéro, Struggle of the Nations*, 248)]
- (7) *Theophrastus* describes a palm of Ethiopia which may be the *Docm* palm of Upper Egypt (*Theoph.* H. P. ii, 6, 10). Sprengel identified this palm with *Coco-palm* according to Schneider, the Editor of *Theophrastus*.
- (8) *Pliny* (c.A.D. 70)-xiii 9-mentions "*Coicas*" but the word may not mean the *Cocoa-nut* tree.
- (9) The quotations recorded in the *Hobson-Jobson* about the *cocoa-nut* tree range from A.D. 545 to 1881.

This is in short the history of the *Cocoa-nut* tree reconstructed mainly from non-Indian sources.

Among these I don't find any mention of Capt. Edward Moor's Note IX (pp. 402-406) on the *cocanut tree* in *Narrative* (of Operations against Tipu Sultan, London, 1794). In this exhaustive note Moor makes the following remarks about the *coir-ropes*:—

Page 403—"The variety of uses to which the fruit is applied are indeed great: the outside husk is a considerable time soaked in water, when fibrous threads are drawn from it, of which rope of every kind is made, from the size of a pack-thread to a *Sheet Cable* for a seventy four.

The standing and running rigging of the country ships is chiefly of *Koiaar*, which is its general name, but in what language we know not. The best *Koiaar* cables are made on the *Malabar Coast*, a *Anjenga*, and *Kochin*, of the *Lachadevy nut* from which islands they are an article of extensive trade. The shell of the cocoa-nut is well-known in England; in India it is as may be supposed, made subservient to numberless uses'."

The *Arthasāstra*² of Kauṭilya contains some references to the fibrous plants and rope-making material in Chap. XVII (Superintendent of Forest Produce) in Book II (English Translation by Shama Sastry Mysore, 1929).

Pages 107-108—"Mālatī (*Yasminum Grandis florum*) dūrvā (panic grass) arka (*calotropis Gigantea*), Saṅa (hemp), gavedhuka (coix Barbata), atasi (*Linum Usitatis-Simum*); etc. from the group of fibrous plants (valkavarga).

1. Moor refers to the following points about the Cocoa-nut tree.—(1) timber for building; (2) Leaves used for e-venting houses; (3) two leaves plaited together are used for sleeping upon; (4) leaves used as a defence against rain; (5) ropes for shipping etc; (6) Shells used for cups, ladles, etc; (6) Kernel of fruit used as food; in Curry; (8) dried Kernel used for Culinary purposes; (9) Oil is pressed from the Kernel and used for burning in lamps; (10) Kernel remains, after the oil is pressed out are used as food by poultry, beasts, and even men in times of scarcity; (11) Oil is also used for hair with some perfume; (12) tarree or toddy from the tree by cutting the embryo fruit; (13) age of the tree number of years; (14) height—50/60 ft; (15) details of the fruit and the tree; (16) manner of climbing up the tree with a *Kaiagr rope*, for drawing liquor in a pot by the use of a knife; (17) pitch or tar applied to the bottom of tree to prevent ants and insects getting up to drink tarree; (18) tax of one shilling per annum for each tree in Company's territories.—Moor's remarks will be fully borne out by the present-day uses of the Cocoa-nut tree in India.

2. The *Word-Index* to the *Arthasāstra* contains no reference to the *nārikela*. The *Carakasamhitā* (N. S. Press, 1941, p. 160) and the *Sūtratantrikā* (N. S. Press, 1938) describe the properties of the *Nārikela* in the following extracts:—

• *Caraka (Sūtrasthāna Chap. 26—फलवर्ग)*—

verse 130—

“तास्मात्सामि सिद्धानि नारिकेलफलानि च ।” etc.

Sūtrata (Sūtrasthāna Chap. 46—फलवर्ग)—

verses 177 and 180—

“तालवासिकेरापनसमोवप्रकृतीनि ॥१७७॥”

“नारिकेरे गुदस्त्रिधं पित्तार्थं स्वाधु शीतलम् ॥१८०॥”

Muñja (*Saccharum Munja*) balbaja (*El-usino Indica*), etc. are plants which yield rope-making material (*rajjubhāṇḍa*)."

Page 111— Superintendent of armoury.

"Bow strings are made of murva (*Sanoviera, Roxburghiana*), arka (*Calotropis Gigantea*) śaṇa (hemp), gavedbu (coix Barbata), veṇu (bamboo bark), and snāyu (sinew)."

Pages 125-127—Superintendent of Weaving.

Page 125—"The superintendent of weaving shall employ qualified persons to manufacture threads (*sūtra*), coats (*varma*), cloths (*vastra*) and ropes"

Page 126 —"Manufacture of cloths, raiments, silk cloths, woollen cloths, and cotton fabrics..."

Page 127 —"The superintendent shall closely associate with those who manufacture ropes and mail armour, and shall carry on the manufacture of straps (*varatra*) and other commodities.

He shall carry on the manufacture of ropes from threads and fibres and of straps from cane and bamboo bark with which beasts for draught are trained or tethered."

Page 127 — Superintendent of agriculture

—"the superintendent of agriculture shall in time collect the seeds of all kinds of grains, flowers, fruits, vegetables, bulbous roots, roots, *pāllikya* (?), fibre-producing plants and cotton."

Page 140 — Superintendent of ships —

—"In those large rivers which cannot be forded even during the winter and summer seasons, there shall be launched large boats (*mahānāvah*) provided with a captain (*śāsaka*), a steersman (*niyāmaka*) and servants to hold the sickle and the ropes' and to pour out water."

Page 149 — Superintendent of Horses —

—"Qualified teachers shall give instructions as to the manufacture of proper ropes with which to tether the horses."

1. The *Anavahita* (N. S. Press, Bombay, 1905, p. 111—Kāṇḍa I *Varioga* records a word "गुणवृक्षक" in the following line:—

"विकामकः पोतवाहाः, कृषको गुणवृक्षकः ॥१२॥"

Bhāmaji Dikṣiṭa explains the word गुणवृक्षक as "नीमव्यस्वरज्जुबन्धनकाष्ठ" (mast) or "नीमधन बीजक" (a post to which a ship is fastened),

The foregoing extracts are sufficient to indicate the importance attached to *rope-making* industry by the state and kinds of fibres from which ropes were made in India more than 2000 years ago. The reference to *ropes* on large boats does not specify the fibres from which they were made but in view of the specimens of *coir-ropes* found at the Arikamedu Indo-Roman trading station (C.A.D. 1st century) we may presume that these *ropes* may have been prepared from *coir*. The use of *coir* for *plaiting ships* has been amply proved by the extracts in the *Hobson-Jobson* from A.D. 1030 onwards. A question may now be raised : what is the antiquity of this method of ship-building in India? We can answer this question only when we know the history of this method of ship-construction as recorded by James Hornell in his scholarly volume on *Water Transport* (Origins and Early Evolution) Cambridge, 1946. Some points in this history are as follows :—

Pages 234-237-(1) Middle of the 1st Century A.D.—A Greek trader of Alexandria has recorded in the *Periplus of the Erythraean Sea* an account of commercial conditions then existing in the ports of and along the African coast (See trans. by Schoff 1912). At a port called *Rhapta* near Dar-es-Salam he found ships in which the *planking of the hulls was fastened together edge to edge with some form of twine* instead of being nailed to an inner frame-work of ribs as in the case of Greek and Roman vessels of the Mediterranean and Red Sea. This Greek trader refers to vessels on the South Coast of Persian gulf called *madarata* which is equal to *muddra'at* meaning *fastened with palm fibre*" (according to Glaser, 1890). This ship-construction was current on the coasts of Persian Gulf and Indian Ocean until European influence wrought a revolution.

(2) Later records about *Sewn hulls* are numerous. They are briefly as follows :—

- (i) *Marco Polo* (1298 A.D.) refers to *coir* for stitching ships—"no iron fastenings."
- (ii) *Friar Odoric* (died A.D. 1331) sailed to Thana (Bombay). He refers to a bark "compact together only with *hemp*."
- (iii) *El Makrissi* (A.D. 1400-1450)—no nails—planks sewed together with fibre from cocoanut tree.
- (iv) *Vasco da Gama* (A.D. 1498) saw "*Sewn Ships* at Mozambique
- (v) *Cassar Frederick* (C.A.D. 1563) travelled from Basra to Ormuz in a ship "*Sewn with twine*."

- (vi) *Ralph Fitch* (c. 1583) refers to "Cayro" twine for sewing ships.
- (vii) *John Eldred* (1583).
- (viii) *J. Lancaster* (c. 1595).
- (ix) *James Bruce* (1813) and
- (x) *Owen* (1813) all refer to *sewn ships*.

(3) From 2nd to 9th cent. A.D. there are no records to prove the methods of ship-construction.

(4) *Abu Zayd* (10th cent.) states that the system of sewn planks for ship-construction is speciality of *Siraf* (modern *Tāhira* a Persian port). He states that the builders of *Syria* and *Rūm* nail the planks in ship-construction. "They never sew them to one another."

(5) In *India, Ceylon* and even in *Arabia* to-day the *sewn-plank* method is still current.

(6) The arrival of the Portuguese, Dutch, French and English in Indian Ocean was responsible for the introduction of *nails* instead of *pegs* and *twine* sewing.

It is amazing to find how the use of *Coir* ropes in ship-construction persisted for no less than 2000 years. It is worth while investigating in Sanskrit and Prākṛta sources and references to the use of *coir* in ship-construction in ancient and medieval India. In this connection I may record here the following verse in the section on *ships* (*Nauidna-yukti*) in the *Yuktikalpataru* of King Bhoja (c.A.D. 1050) :—

Page 224 of *Yuktikalpataru* (Calcutta, 1917) :—

“ न सिन्धुगाचाईति (०गाछाईति) लोहबन्धं,
 लोह-बन्धैः दियते हि लोहम् ।
 विपद्यते तेन जडेषु नीला
 गुणेषु बन्धे निजलाद् योजः ॥८८॥ ”

Here Bhoja condemns the use of *iron nails* (लोहबन्ध) for binding planks in ship-construction for the reason that ships so constructed are likely to perish in water when these iron nails are attracted by magnets (i.e. the rocky shores containing magnetic iron). He, therefore, recommends the use of *ropes* (गुण-बंध) in binding plank in ship-construction. It is clear from this verse that लोहबन्ध or the use of *iron nails* was known in India in the 11th Century. The Indian ship-builders preferred, however, to go by their usual method of *गुणबन्ध* which had the advantage of being safe as it could resist magnetic attraction.

While engaged in writing the above paragraph about Bhoja's reference to लोहबन्ध and गुणबन्ध I was agreeably surprised to receive

a very informative letter dated 1st July 1948 from my ever alert friend Rao Bahadur K. V. Rangaswami Aiyangar on the subject of my inquiry. I have great pleasure to record its contents here most gratefully :—

"Many thanks for your letter of the 28th June 1948 about your idea of writing a paper on the *rope-making Industry of India*. As I was long resident in Travancore in which *coir* manufacture (ropes, mats etc.) is a staple industry today and has long been so, I know something of it. It is an intriguing subject worth pursuing. *Rajju* and *Valkala* are, I believe, the Sanskrit words (for rope). The latter suggests twisted bark, the former only its binding effect. *Marco Polo* (See Cordier's Edition) contains descriptions of ship-building in India in his time, and so does *Al Biruni* (ed. Sachau). Radhakumud Mookerji in his *History of Maritime Activity in Ancient India* cites Bhoja's *Yuktikalpataru* as the only Sanskrit book known to him, which deals with ship-building. It has an interesting *Sloka* which explains why iron nails were not used in binding planks: these nails were incapable of resisting the magnetic attraction of rocky shores containing magnetic iron (see p. 224 of *Yuktikalpataru*, Calcutta). It is cited by Mookerji on p. 21. The idea is used in the *Arabian Nights* in the story of a ship in which Sindabad sailed, being torn up by magnetic attraction, when it neared such a coast. *Marco Polo* on the other hand mentions Malabar ships being bound with iron nails.

In Tamil, *Kayar* or *Katar* stands for *coir*, which is said to be derived from *Kāyaru* (Malayalam). See *Hobson-Jobson*, p. 180. It is said to occur in early Arabian writings in the form *Kānbar* or *Kanbār*. *Kayar* or *Katar* is given in Winslow's *Tamil-English Dictionary* (1862, p. 244 as astringency, or the soft fibrous part above the cocoanut) which is astringent in taste. *Coir*, therefore, must have originally meant cocoanut-fibre ropes. The habitat of the cocoanut palm is the Indian Ocean lands. It is curious that in the *Rāmāyana* (*Sundara-Kāṇḍa* chap. 48, *Sloka*s 46 and 48). Hanumān is said to have been rebound by *Sapa-vaikāṣṭh* and *valkena*, after being bound by *brahmāstra*. How did *hempen cord* get into Ceylon, the land of the cocoanut? Hemp is more common in North India than in Indian Ocean tracts. Vilmiḱi was apparently not familiar with cocoanut fibre ropes.

In the *Yuktikalpataru* (pp. 224 ff.) you will find a brief description of ship-building including the *verse on nails* quoted by Mookerji.

In Kauṭilya the *Valka* and *Rajju* are mentioned on pp. 100, 113, 203, 211, and 403, and pp. 113, 155, 203, 217 and 42 respectively. *Sapa* (hemp) appears on pp. 100, 102, 113 and 403). The fibre of *tāla* (palm) is known to him and not of the cocoanut (*ndlikera*). For *tāla*, see pp. 81, 84, 103 and 102 of Kauṭilya (1st ed.)."

These remarks are illuminating enough but the questions raised by them need to be answered. One general question which seeks solution is : *At what time the Aryans in India started the coir-rope-manufacture in India?* The solution of this question depends on the *history of the cocoanut as revealed by Sanskrit sources, especially prior to A.D. 500.* I hope some scholar interested in the history of Indian plants will tackle this problem with a view to clarifying the industrial and economic history of the different products of the cocoanut tree.

As regards the representation of ropes in art and architecture my friend Dr. H. Goetz, Curator, Baroda Museum, writes to me as follows in his letter dated 26th July 1948 :—

"Plaited thick ropes appear as an ornament on certain temples on the Pratihāra period e.g., at Osia in Marwar and I believe, also at Survaya in Gwalior State. Thinner plaited ropes are seen on the Churah fountain stones in Chamba. Portuguese architecture of the reign of Manuel the Great, which is generally regarded as variation of Gothic art inspired by Indian prototypes, likewise, makes almost an excessive use of plaited rope motifs; what their model may have been, I have not yet been able to find out."

I am thankful to Dr. Goetz for these suggestive remarks which open up quite a new field of inquiry pertaining to the subject of this paper. I hope some scholar conversant with this field would publish a paper on the representation of ropes in art and architecture with a view to supplementing the data recorded in this paper.

1. My friend Mr. A. N. Gulati, M.Sc., of the Technological Laboratory Matunga (Bombay), wrote to me on 10-7-1948 as follows :—

"(i) Please refer to page 15 of my paper with Dr. Turner on *Early History of Cotton*. Here we refer to small pieces of string found to be attached to some pottery from *Mohenjo Daro*. There were two samples of strings. Both proved to be made from cotton. They were both 24 fold cords. But while the basic yarn was 14 counts in one, it was 18 counts in the other. One of these had a purple colour on it. This finding appears to show to us that rope-making must also have been known to the *Pre-Aryan Civilization of Indus Valley*.

(ii) In a recent publication, where I gathered a lot of information about best fibres like hemp, jute etc., I find it mentioned in *Fibrous Plants of India* by R. T. Forbes, 1885 (London) that the fibres of *sethania* on account of their being able to withstand wetting better than any other fibre are eminently suited for making drag ropes of fishing nets, while those of *Butea frondosa* are used for making ropes and caulking boats.

(iii) The use of coir twine for stitching hides and leather canoes appears to be still continuing.

(iv) Coir ropes are eminently suited for shipping because, unlike other ropes they keep floating in water even after getting wet."

(I am thankful to Mr. Gulati for these informative remarks.)

16. HISTORY OF WAX-CANDLES IN INDIA*

(A. D. 1500-1900)

The history of the Indian technical arts and sciences is shrouded in mystery, though it would be possible to clarify it considerably on the strength of Sanskrit and non-Sanskrit sources. During the last ten years I have published several papers¹ dealing with a few problems connected with the cultural history of India which includes the history of Indian technical arts and sciences.

The history of Lighting and Lighting Appliances in Ancient and Mediaeval India, if studied in detail, would prove a fascinating study for any lovers of Indian culture. I have collected some material on this topic but it would take a long time to release it, in the meanwhile I have thought it advisable to write some notes on stray topics connected with this subject. Accordingly I have published a paper² on the reference to Persian oil (*pārasika taila* or *Turuṣka taila*) in Sanskrit sources (between c.A.D. 500 and 1100). According to the evidence recorded in this paper it appears that some sort of crude Persian oil or Kerosine oil was used as lamp-oil in Northern India some time between A.D. 500 and 1100. While I was writing this paper a friend of mine asked me to write on the *history of Candles in India*. I lost no time in studying this problem and collecting evidence on it. I have great pleasure in recording below this evidence, howsoever scanty it might be.

In the article on "Candle" in the *Encyclopedia Britannica*³ we get some historical information about Candle. I note some points from this information :—

(1) *Candle* is a rod of fatty or waxy material through the centre of which runs fibrous wick.

(2) Modern Candles are the successors of the early *rushlights* which consisted of the pith of rushes soaked in house-hold grease.

* *Annals* (B. O. R. Institute), XXXII, pp. 146-165.

1. See *Bibliography* of my writings (1916-1946) published by me in 1947. The *subject-index* (pp. 38-39) of this *Bibliography* records all my papers on *Indian Culture and Vijnāna* (technical arts and sciences). Some more papers on these subjects have been published since the *Bibliography* was published.

2. See *Journal of the Kalinga Historical Society, Balangir* (Orissa), Vol. II, No. 1, pp. 15-17.

3. Vide pp. 738 of Vol. 4 of 14th edition (1929).

(3) An improvement was made later by dipping cotton threads in melted tallow. By alternate dipping and cooling the desired thickness was obtained. These 'tallow-dips' were one of the most ancient forms of illuminant and they continued to be a house-industry for centuries.

(4) In Paris in the 13th century A.D. there was a guild of travelling *candle-makers*, who went from house to house making candles.

(5) *Bees-wax* candles have been used from early times and are mentioned by the Roman writers. For mystical reasons the Catholic Church prescribes *bees-wax* candles for Mass and other liturgical functions.

(6) *Spermaceti*, a white crystalline wax obtained from the head cavity of the sperm or "right" whale came into use in the latter half of the 18th century. Owing to its extreme brittleness spermaceti requires to be mixed with a small proportion of other material such as bees-wax.

(7) *Modern-candles* are made of paraffin wax (introduced about A.D. 1854) or stearine or mixtures of these.

As the use of candle is closely connected with the *candle-stick* the following points from the article on *candle-stick* in the *Encyclopædia Britannica* (Vol. 4, p. 740) are noteworthy:—

(1) The history of candle-stick deals with those of the Church. Moses was commanded to make a candle-stick for the tabernacle, of hammered gold, a talent in weight, and consisting of a base with a shaft rising out of it and six arms and with seven lamps supported on the summits of the six arms and central shaft. When Solomon built the temple he placed in it ten gold candle-sticks, five on the north and five on the south side of the holy place.

(2) After the Babylonish captivity the golden stick was again placed in the temple as it had been before in the tabernacle by Moses. On the destruction of Jerusalem by Titus it was carried with other spoils to Rome.

(3) Representations of the *seven-branched candle-sticks* occur on the arch of Titus at Rome and on antiquities found in the catacombs at Rome.

1. In ancient India the use of animal fats for feeding lamps was prohibited by the *Dharmasāstra* texts. The practice of dipping twisted rags (forming a sort of wick or *toroh*) in oil and then lighting them appears to have been current in mediæval India. The term for this illuminant used in Marathi is "काण्ठाकाण्ठा" (Vide *Sabdakalpa* by Karve and Dote, Vol. II, 1933, p. 652). Series of such wicks dipped in oil or ghee and kept in a tray were lighted and waved before a temple image or house-hold gods at *devis*. They were known as "काण्ठाकाण्ठा" (See *Sabdakalpa* *ibid.*)

(4) The *primitive form of candle-stick* was a torch made of slips of bark, vine tendrils, or wood dipped in wax or tallow, tied together and held in the hand by the lower end, such as are frequently figured on ancient painted vases. The next step was to attach to them a cup (discus) to catch the dripping wax or tallow.

(5) During 11th and 12th centuries A.D. a certain amount of ornamentation appeared.

(6) Previous to the 17th century, iron, latten, bronze, and copper were used for making candle-sticks. Thenceforward silver came to be used. In more modern periods, Sheffield plate, silver plate and China became very popular.

(7) The golden age of the candle-stick lasted from the 3rd quarter of the 17th century to the end of the 18th.

(8) The history of candle-stick shows an increasing tendency towards simplicity.

The foregoing remarks on the history of *candle* and *candle-stick* contain no reference to the use of candles in India.

Before recording my evidence about the history of candles in India I must point out that the Hindu *Dharmaśāstra* texts prohibit the use of any kind of animal fat or grease for feeding lamps and consequently any kinds of candles, in which such fat or grease was used, were not likely to have found favour with the orthodox Hindus of ancient and mediæval India. In the *Dānakhaṇḍā* of the *Caturvargacintāmaṇi* (*Bib Ind.*) Vol. I, Calcutta, 1873, p. 945 we find Hemādri (c.A.D. 1260) quoting an extract from the *Viṣṇudharmottara* on the topic of *dīpa-dāna* or gift of lamps to deities etc. This extract states :—

“घृतेन दीपा दातव्यास्तैर्लेखा यदुत्पन्नम् ।

कृत्स्नास्त्रादिभिर्दीपा न तु देयाः कथञ्चन ॥”

1. Vide p. 207 of *Dictionary of Phrase and Fable* E. C. Brewer, London 1912—Brewer makes interesting remarks on *Candle* and allied terminology and its usages. I note some points from these remarks.—(1) It was an ancient custom of presenting on January 6th a candle of various colours to three kings of Cologne. (2) It was the practice of Roman Catholics to burn candles before the image of a favourite Saint, carry them in procession and place them on their altars. (3) *Selling by candle* was a kind of auction. (4) Candles used by Roman Catholics at funerals are the relic of an ancient Roman Custom. (5) Practice of holding a candle in the Catholic Church for the reader. (6) Shakespeare calls stars as “Candles of the night” (*Merchant of Venice*, V, 1). (7) *Candlemas Day*—feast of the purification of Virgin Mary on Feb. 2. Custom of burning candles to the goddess *Februa*, mother of Mars, to scare away evil spirits.

Only *ghee* and *oil of sesamum* were to be used for sacred lamps. No kind of fat or *marrow* of the bones and flesh of animals was to be used for these lamps. The extract further states ;—

“ प्राणिजां नीचरकां च वृषवर्तिं च वज्रवेद्यं ।
विशेषेण च कर्तव्याः पद्मसूत्रमवा नृपः ॥ ”

The wick of the lamp was to be made of lotus threads or fibres. One should avoid the use of any animal product in making this wick.¹

In the history of the candle recorded above from the *Encyclopaedia Britannica* reference is made to the use of *Bees-wax* for candle-manufacture from Roman times. I have not come across any references to the use of *bees-wax* in India among the materials used for feeding lamps in ancient and mediæval India. As *bees-wax* is closely connected with the manufacture of candles I note below some *information about it from Sanskrit sources* :—

(1) The *Amarakosa* (Between A.D. 500 and 800) refers to *bees-wax* as “मधुच्छिद्रं तु सिक्ककम्” (Kāṇḍa II,) *Vaiṣyavarga*, verse 108 (vide p. 224 of Poona Edition by N. G. Sardesai and H. D. Sharma). Bhānuji Dikṣita (C.A.D., 1630) in his commentary explains the two words मधुच्छिद्र and सिक्कक for *bees-wax* and observes द्वे ‘मधुच्छिद्रश्च’ मोम इति इवातरत्न.” It is clear from this statement that the term “मोम” for *bees-wax* was current at Benares about A.D. 1630. Bhānuji does not refer to ‘मोमवर्णी’ or *bees-wax* candle. This term for candle in general is now current in Northern India. In the Deccan we use the term “मेजवर्णी” for candle.

(2) Vāgbhaṭa I in his *Aṣṭāṅgasaṁgraha* (C.A.D. 625) refers to *bees-wax* as मधुच्छिद्र for use in a medical preparation “सतीष्णवृत्तैः” :—

“महातक मधुच्छिद्रजीर्णपिप्पलाकानारैः ।
वृत्तैर्लक्षणेसायकैस्तत्र सतीष्णवृत्तैश्च ॥१७॥ ”

(Vide p. 128 of अ. संग्रह (सूत्रस्थान Chap. 11) ed. by

R. D. Kinjavadekar. Poona 1940)

1. Mitraśāstra (A.D. 1600-1650) in the *Lakṣyaśāstra* of his *Vivramitrodeya* (Chowkhamba Sans. Series, Benares, 1916, pp. 650-652) quotes some earlier works which describe the following lighting utensils and appliances :—

- (1) दीपपात्र (extracts from वैश्वानसग्रन्थ and सिद्धान्तशेखर).
- (2) दीपमाला (extracts from सिद्धान्तशेखर).
- (3) दीपधार (extract from सिद्धान्तशेखर).
- (4) दीपिका (extract from वैश्वानसग्रन्थ).
- (5) नीचान्नपात्र (extracts from सिद्धान्तशेखर and वैश्वानसग्रन्थ).

There is no reference in the several extracts quoted to any kind of *Candle* or *Candlestick*.

(3) Vāgbhaṭa II (C.A.D. 8th or 9th century) refers to *bees-wax* in the following extracts :—

Aṅgahārdaya (*Cikitsitasthāna*, chapter 3 - कासचिकित्स) —“
 “अज्ञं सपिमपुच्छिच्छं जीवनीयं तन्नं सिताम्” (verse 75)

and *Cikitsitasthāna*, chap. 19 (कुष्ठचिकित्स) verse 78—

—“देवः समपुच्छिच्छो विपारिका तेन नश्यति ह्यका ।”

and verse 84—

—“सिद्धं सिष्यकसिन्दूरपुरगुण्यक ताक्ष्यंजः ।”

(4) The medical glossary *Dhanvantarinighaṇṭu* (earlier than *Amara*) records the following synonyms about *bees-wax* (सिष्यक) :—

“सिष्यकं मधुकं सिष्यं मधुच्छिच्छं मधुसितम् ।

मधुसोपं मदनकं मधुयं माक्षिकामलयम् ॥”

(See p. 608 of *भट्टोद्भवकोश* by K. M. Vaidya, Trichur, 1936)

(5) Narahari (C.A.D. 1450) in his medical glossary *Rājanighaṇṭu* (*Ānandāśrama Sans. Series*, Poona, 1896, p. 118; records the properties and synonyms of *bees-wax* :—

गुणाः—“सिष्यकं स्निग्धमधुरं भूतघ्नं अमनसंचिकित् ।

हृत्तिलं धीसर्वकण्ठ्वादिमन्त्ररोपणमुत्तमम् ॥ १२० ॥

मेघनं पिच्छलं रज्जु कुहवासात्तन्निगच्छुट् ।

राजनिघण्टौ सुषर्णादिष्वयोद्सो वर्गः :—

सिष्यकं मधुकं सिष्यं मधुयं मधुसंभवम् ।

मदनकं मधुच्छिच्छं मदनं माक्षिकामलयम् ॥ १०३ ॥

क्षीद्वियं पीतराः च स्निग्धं माक्षिकं तथा ।

क्षीद्वियं मधुसोपं च द्वायकं माक्षिकामलयम् ॥ १०४ ॥

मधुपिस्तं च संश्लोकं मधुस्यं चोन्विशतिः ॥”

1. I may note here the reference to *bees-wax* in the *Geographical Account of Countries round the Bay of Bengal (A.D. 1669-1670)* by Thomas Bowrey (Hakluyt Society Cambridge, 1905) :—

Page 290—foot note 3—“*Bees-wax*” mentioned as an article of trade of the Malays (of Achin) with Pegu etc. (see p. 35 of Lookyer's *Trade in India*).

Pages 56-57—Bowrey mentions *bees-wax* as *king's commodity* in his account of Choromandel. In foot-note 2 the editor quotes an extract dated 8th Sept. 1678 from the *Diary of Streynsham Master*; p. 57, on his journey from Balasor to Hugli, which reads “Ganges, on the east side of which most part of the great quantity of *bees-wax* is made, which is the *king's commodity*.”

P. 122—Bowrey mentions “*bees-wax*” as a product of Bengal produced in plenty.

P. 225—Bowrey refers to “*bees-wax*” as *king's commodity* in his account of Patna (Bihar).

P. 136—foot-note 1—*Townier*, Vol. II, p. 141—reference to *wax* as a product of Bengal.

Page 431—Narshari mentions the vernacular term *मेण* for bees-wax in the following verse :—

“मेणे कडिणे लोकार्णे लपणे काळे व पृंढे ।
मदनस समाख्यातः पदमी समुदाहृतः ॥१२॥”

(6) The *Carakasamhitā* (*Cikitsāsthāna* Chap. 7, verse 121—p. 456 of N. S. Press Edition, 1941) refers to *bees-wax* in its treatment of leprosy (कुष्ठ) :—

“रेवः स मधुच्छिद्रो विपारिका तेन क्षाम्बहेऽभ्यका ॥”

(7) Dr. G. P. Majumdar in his remarks of *Toilet* (p. 84 of *Some Aspects of Indian Civilization*, Calcutta, 1938) states that according to *Vinaya* texts the Buddhist *Bhikkus* are “forbidden to smooth the hair with a comb or with a shampooing instrument with pomade hair oil or *bees-wax*.”

The foregoing few references are sufficient to establish the antiquity of *bees-wax* in India for at least 2000 years, if not more. These references, however, are not useful to us in our inquiry about the use of *bees-wax* for the manufacture of candles in India.

The Marathi Dictionary *Sabdakośa* (by Date and Karve) makes the following entries about candle or *मेणवची* :—

Vol IV (1938), p. 2527—

मेण-wax (मधुच्छिद्र) Persian मोध

मेणवची-Bees-wax candle (Persian मोध, मधु+वची)

मेणवाच—मेणवची

Page 2543—मोणवची—मेणवची

Usage—“साहे मोम्बत्याची कापने ती पुसून लावावी”

—पत्रे चावी २८९ (काश्चेतिहाससंग्रह)

(This usage of the word *मोम्बची* is later than A.D. 1700).

I have already recorded the reference to *मेण* in the glossary by Narshari (C.A.D. 1850) viz *Rajanighanṭu* in which the Sanskrit word *मदन* is equated with *मेण* (मेणे...मदनस समाख्यातः). This reference proves that the term *मेण* was current C.A.D. 1850. This conclusion is corroborated by the references to “*मेण राठी*” and “*मेण रैल*” on folio 33 of a Ms on cosmetics and perfumery called the *Gandhavāda* with a Marathi commentary available in B. O. R. Institute Collection (Raḍḍi collection). According to my evidence this work was composed between C.A.D. 1350 and 1550. This use of *मेण* or *bees-wax* in cosmetics is in harmony with the reference to *bees-wax* in the *Vinaya* texts which, however, prohibit its use for toilet purposes by the *Bhikkus* as pointed out by Dr. G. P. Majumdar and noted by me already in this paper.

The Maratha King Shābu of Satara, the grandson of Shivaji the Great, was brought up in Mogul captivity in his boyhood. He was therefore, fond of certain articles of luxury current at the Mogul court in the latter half of the 17th century and when he began to rule the Maratha country with his headquarters at Satara he procured these articles for his use as will be seen from the following evidence :—

In the *Peshwa Daftar Selections* ed. by Rao Bahadur G. S. Sardesai we get the following documents proving the use of *wax-candles* (मौमबत्ती) and *rose-water* (गुलाब) by King Shahu (A.D. 1682-1749) :—

P. D. Selection No. 8 — Letter No. 51 dated 13th April 1723. This letter written by Kanhoji Angre Sarkhel to King Shahu, forwarding about 750 *candles* ("मौमबत्ती") weighing 7½ *maunds* and 5 *seers* together with about 20 *rose-water* bottles ("गुलाब सिले सुमार २०") in response to Shahu's letter to the writer, stating that 1000 *candles* were required by Shahu in connection with the marriage of Rājasbāi ("बाजा कडे की पिरवीब राजसबाईच्या लग्नास मौमबतियाचे प्रयोजन आहे तरी येक हजार मौमबत्या पाठवून देणे म्हणोन बाजा, त्यावरून मौमबत्या व गुलाबसिले पाठविले आहेत").

Rao Br. Sardesai adds the following note to this letter :—

"Raja Shahu constantly ordered *candles* and other foreign articles from the Angres who probably procured them from the British."

P. D. S. No. 8 — Letter No. 52 dated 3-8-1715 (?) is a Memo of foreign articles ordered by King Shahu from Kanhoji Angre. This list includes 400 *candles* ("४०० मौमबत्ती"), 100 *rose-water bottles* ("१०० गुलाब सिले") together with elephant tusks, knives, cloths, tobacco (बग्यादी and सुरती), musk, gun powder, swords etc.

The foregoing evidence conclusively proves the use of *candles* in the Maratha country! later than A.D. 1700, though this use was confined

1. The increasing use of candles in the Maratha Country during the regime of the Peshwas is vouched by the following references in *Peshwa Daftar Selection No. 32* (Private Life of the later Peshwas) ed. by Rao Bahadur G. S. Sardesai, 1933 :—

Letter No. 30 of 23-8-1815—"१००० रौतनादकचे मेणबत्त्या खरेदी बा॥"
(Rs. 1000 spent for the purchase of *candles* for Ganapati Festival in A.D. 1815).

Letter No. 83 of 30-8-1771—"मौमबत्या सुमार १०० पाठविल्या पावल्या."
(These *candles* were received for the Jewellery Department of the Peshwas).

Letter No. 226 of 16-4-1815—This is a *contract* (मदत) for supplying *lights* in the Peshwa's palaces at Poona undertaken by one Jivaji Krishnaji Bhutkar. It refers to दीप, बत्ती, कापूस, तेल. No reference to *candles* is found in this contract for 12 months. Evidently the *lamps* at the palaces were *oil-lamps* normally and *candles* were used on special occasions.

to royalties. Rao Br. Sardesai states that Shahu ordered *candles rose-water* etc, from Kanhoji Angre, who probably purchased them from the British. If this statement is correct we must presume that *candles* were not manufactured in India but that they were an article of foreign import in India in the early part of the 18th century.

Let us now record the use of candles in India in the 17th century. In this connection the evidence of the glossary called the *Kājavyava-Āśrahoṣa* composed by Raghunātha Paṇḍita about A.D. 1676 by order of Shivaji the great (died A.D. 1680) is very helpful. In the 1st section of this glossary called the *Rājavarga* (p. 3 of the Poona Edition; 1880) the author records some terminology about lighting appliances etc. in the following extract :—

“ दीपघरास्तु ते ॥२२॥
 मद्याले स्तु, हिलाळी तु मदीपघर उच्यते ।
 दीपिका दिवटी मोका हिलाळस्तु मदीपकः ॥२३॥”
 —“ दीपघराका तु समयी फिलसोजः स्तम्भदीपकः ॥२७॥
 दीपस्तु चिरागु सिक्काचिरागु तु शेषो रोहणदीपकः ।
 स्वाध्मन्तरादीपस्तु कंदील । इति नामतः ॥२८॥ ”
 उत्सोजः स्वाध्मपत्तल ऊहानी धपयात्रकम् ।
 मैनकोषस्त मोमदानी मोमवर्षी मैनवर्षिका ॥२९॥”

In the above extract the following words and their meanings recorded by Raghunātha Paṇḍita are useful for our present inquiry :—

- (1) मोमदानी = मैनकोष (candle-stick)
- (2) मोमवर्षी = मैनवर्षिका (candle or bees-wax candle)

I am not aware of the existence of the words मैनकोष and मैनवर्षिका in any lexicons Sanskrit or Prakrit so far known. It appears that

1. Vide p. 73 of *Portuguese Verables* by Dalgado, G. O. Series Baroda, 1936—“? *Candil* (in the old acceptation of “a lamp,” now obsolete). Guj. *Kandil*, a glass lamp.—Hindi, Hindust. *qandil*—Kao. *Kanoil*—Mal. *Kandil*,—Acc. *Khandel*.—Jap. *Kantaro*, a hand lamp.”

In all probability the word is imported directly from the Arabic *qandil*. The origin of the Japanese term is doubtful; perhaps it is from the English *Candle*,—notwithstanding the difference in meaning. Goncalves Viana believes that it is from the Spanish *Candela*, “a candle.”

Peshwa Daftar Selection No. 32 (Private Life of later Peshwas) Letter No. 36, refers to a फानूस (lantern) fitted with mirrors (आंसि कंदईद्वार) required by the Peshwa. A special carpenter was asked to prepare this lantern. (The *Sabdakosa* by Dote and Karve, p. 2173, records the words फानूस, फानूस, (Arabic फानूस) = कंदील.—Usage: ... ‘फानूस लावाये खात मैनवर्षया लावाया (पत्रे, यादी etc. २८५) and प्रभाकर कल्पना (१९) ‘फानूसें हातें फिरगानी काल बिजोरी । मऊन मैनवर्षया मकलाया हातेहाती ।”).

Raghunātha has coined these words to explain the foreign' terms मोम्बली and मोम्बली then current in the Maratha country like many other terms which constitute the *Rājavyavahāraśāstra*, a glossary prepared with the object of the clarifying the meanings of these terms for the benefit of Shivaji's courtiers and other officers in his kingdom. I have already pointed out that Bhānuji Dikṣita (C.A.D. 1630) living at Benares uses the Persian term मॉम् (bees-wax) in explaining Amara's two terms "मधुपिच्छ" and "सिक्चक" for *bees-wax*. Bhānuji nowhere refers to मोम्बली (candle) as such, though candles were used in India at this time will be seen from the evidence recorded below :—

John Fryer in his *Travels (A.D. 1672-1681)* published by Hakluyt Society, London, 1912 refers to *wax for Tapers* in his *Description of Goa* as follows :—

Vol. II, page 28—"The finest *Manchet* (= wheaten bread) it may be in the world is made here and the purest *Virgins Wax for Tapers*."

The Editor of the above *Travels* makes the following remarks on the word *Tapers* in the above extract :—

"Bee farming for the collection of honey and *wax* most of which is sent to Goa and *made into candles for Church altars* is still an industry in *Kanara (Bombay Gaz. XV, Pt, 1, 104 ff.)*.

Page 11 — Description of a *Church at Goa (college of Dominicans)* "In the *Sacristan* were *massy silver candle-sticks* and other vessels—very Rich."

Page 251 — *Travels into Persia*—

"Nor can we forget another sort of Black Traders, burning light at Noon-day, which are the Necromancers, whose shops are bestuck with *candles*, lighted in every hole....."

Tavernier in his *Travels in India (Vol. II, London, 1859)* makes the following references to *candles* :—

Page 8 — Speaking of large quantities of spun cotton, exported to Europe by the English and Dutch companies Tavernier states :—

1. In his काशो-मगनी कोश (Poona, 1925, p. 208) Prof. M. T. Patwardhan makes the following entries about मोम् (bees-wax) and allied terms :—

मोम् ब्रामा (पु.) मेग-काय, "कर्वे किरकोठ बाधा व मोम्-ब्रामा यंस; व हुष्णपायठ बणिक लागमी" (see मधेश्वर दरबारची बातमीपत्रे १११५)

बाम्-दीक मज हृदयी—"प्रणत्यागच केला तर नाहूक दुर्मिमिल्य होईल यास्तव मोम्बीकही बाकी (see म. द. बातमीपत्रे १११५)

मोम्-बली (बी.) मेगवली—"झाबें मोम्बरांची लावणें तां पुष्ट लावावी" (see पत्रे—"पत्रे हारी कौरे" २८६).

"These are the kinds which are used to make the *wicks of candles* and stockings and to mingle with the web of silken stuffs.

Page 292— Speaking of a *pagoda in Siam* Tavernier states :—

"In the middle there is, it were, a great chapel all gilded within, where a *lamp* and three *wax-candles* are kept alight in front of the altar which is covered with idols..."

Page 336— M. Constant, commander at Gombroon (Bandar Abbas) gave a dinner to several Franks. In the description of this dinner Tavernier refers to *lamps*, which were "*saucers full of oil* attached to the walls of the house and at a distance of about one foot from each other". Instead of these lamps M. Constant ordered "*white wax-candles to be placed throughout*, and both within and without the house there was light every where". All the merchants both Christians and Muhammadans were surprised at it. At this Tavernier remarked :— "*this wax does not cost so much to the company as it does to private persons because all the Dutch vessels which come from Mocha (Mocca) carry much of it as it is very cheap there.*"

Page 18 — Speaking of *Cinnamon* from Ceylon Tavernier states :—

"The Portuguese used to gather quantities of it (*Cinnamon*) which they placed in Chaldrons with water together with the small points of the ends of the branches and they boiled the whole till the water was evaporated when cooled, the upper portion of what remained was like a *paste of white wax* and at the bottom of the Chaldron there was *Camphor*. Of this paste they made *tapers*, which they used in the Churches during the service at the annual festivals, and as soon as the *tapers* were lighted all the Church was perfumed with an odour of cinnamon. Formerly the Portuguese procured cinnamon from the countries belonging to the *Rajas* in the neighbourhood of *Cochin*."

Page 413 — Giving an account of his *arrival in Holland* with the Dutch fleet, Tavernier states :—

"As soon as we had sighted the coasts of Holland, all the soldiers of our fleet.....fixed a quantity of *small wax-tapers* about the poop and bow of the vessel.....On our vessel alone there were more than 1700 of these *wax-tapers*, both large and small. The sailors had kept them since they were at *Manillas* from whence they had brought a large quantity, as also from *Point de Galle* in the island of Ceylon.....as wax was cheap throughout India and is easily bleached, every religious house always has a large supply of *wax-tapers* on account of the festivals, when numbers are lighted before the *grand altar* and in all the *Chapels*. Thus the least of the Dutch Sailors had *thirty or forty* of these *tapers* for his share and some of them had some as thick as the thigh."

Among the references to the use of *wax-candles* by Tavernier we note with interest: their use before idols in a pagoda in Siam.

Pietro Della Valle in his *Travels in India* (Hak. Society, London, 1892) Vol. II, makes the following references to *candles* :—

Letter No. V dated 22nd November 1623 from Ikkeri (to the South-east of Honawar in the Shimoga District of Mysore):—

Page 235 — Description of a Shiva Temple.

—“This idol was called *Virena Deuru*...at the upper end in a dark place with *candles* before him.

Page 237 — “In the middle of the temple a darker enclosure.. wherein stood.....a little stockade or *Pallisade*... to hang *Lamps* and *Tapers* upon at more solemn days and hours.”

Page 238 — “*Tapers* being lighted, particularly at the stockade.”

—Idol of *Virena* taken in a procession.

—Two Ministers “with lighted *Tapers* marched first, followed, by the Idol in his canopy.

Page 239—One of the Priests or Ministers “began to salute the Idol a far off with a dim *Taper* in his hand making a great circle..... several times.”

—“*Palisade of lights* ... through which it is not lawful to pass.”

Page 240—The priest “took a *wax-candle* and therewith described within the *Palanchino* or carriage before the Idol many circles with lines at the end; and putting out the *candle* took the Idol out of the *Palanchino* and carrying it through the railed stockade in the middle of the *Torches*, placed it on its Tribunal at the Upper End where it usually stands.”

—“*Candles* being put out, the ceremonies ended and the people return ed to their Houses” (The Editor observes in footnote 2 on p. 240 :—

“*Wax-candles* are certainly not common in India even in the present days, among natives, and were probably used only in temples.”)

Page 271—“The night following there was a great solemnity in all the Temples by lighting of *candles*.”

Page 279—“*Tapers* were lighted up in all the Temples of Ikkeri.”

On p. 206 Della Valle mentions the *Divāli* (“the *Devāli* or feast of the Indian Gentiles”) which was celebrated on 24th October 1623. On page 283 he describes in picturesque detail a festival of illumination on 21st November 1623 which was a “New moon” day and at which the King of Ikkeri, Venkatappa Naik was present. The description of this illumination reads like the description of *Divāli*. I, therefore, reproduce it below :—

Page 283—"November the one and twentieth. This night an infinite number of *Torches* and *candles* were lighted, not only in all the Temples, but also in all the Streets, Houses, and Shops of *Ikkert*, which made a kind of splendour over all the city. In each of the Temples was its Idol, which in some was a serpent; and they had adorned the outward Porches, not only with lights but also with certain *contrivances of paper* on which were painted men on Horseback, Elephants, people fighting and other old figures; behind which papers *lights* were placed in certain little Arches like those which we make in our sepulchres; these with other gay Ornaments of silk hung round about made a sufficiently pretty show. In the great Temple not only the inside, in the middle whereof is a very high and slender cupola (which appears without too) but also all the outer walls and all those round about the Piazza which lies before it, as also the Houses on the adjacent sides, were all full of *lights*. The concourse of people of all sorts and degrees, both *Men and Women*, was very great; and they appeared to go about *visiting all the Temples*.

When it was very late the King came to the great Temple accompanied only by his two grandsons ... in a *Palanchino*, his two nephews on Horse-back ... at a great distance, with some number of Soldiers and Servants on Foot ... The King stayed in the Temple about an hour, being entertained with Musick, Dancing and other things which I could not see because I was without."

We note with interest the *contrivances of paper with lights behind them*, which adorned the outward porches at this festival of A.D. 1623 on the *New-Moon* day. They can be compared with hanging paper-lanterns which adorn the fronts of houses in modern *Diodli* celebrations.

Letter No. VII dated 31st January 1624 from Goa—

Page 348—Description of a Temple near Mangalore

—Description of a Pillar for light near the Temple:—

"Where the stairs begin stands a high, straight and round *brass* pillar¹ ty'd about in several places with little fillets; 'tis about 60 Palms (each palm = about 9 inches) and one and a half thick from the bottom to the top, with little diminution. On this Pillar are placed about *seventeen round brass wheels*² made with many apokes round about like stars: they are to support the *lights* in great Festivals and are distant about three Palms one from another. The top terminates

1. The Editor States.—"This pillar is not mentioned in modern descriptions of the Temple."

2. What was the exact size of these wheels? Were they used as pulleys for bolting up hanging lamps?

in a great *brazen candle-stick* of five branches of which the middlemost is highest, the other four of equal height. The foot of the Pillar is square and hath an Idol engraven on each side : the whole structure is or at least seems to be, all of one piece."

Page 348—"The walls of a less Inclosure (wherein according to their custom, the Temple stands) are also surrounded on the outside with *eleven wooden rails* upto the top, distant one above the other little more than an *Architectural Palm* : ' these also serve to bear *Lights* on Festival occasions ; which must needs make a brave show, the Temple thereby appearing as if it were all on fire!."

It is clear from the evidence recorded so far that *wax-candles* were used in the 17th century not only by the Christians of Goa in their Churches but also by the Hindus in their temples as clearly stated by Pietro Della Valle (A.D. 1623-24) in his description of Hindu Temples. This use of *wax-candles* in Hindu temples in A.D. 1623 and in a *paeda* in Siam referred to by Tavernier (C.A.D. 1670) is further corroborated by Duarte Barbosa (A.D. 1519) who in his *Travels* (Hak. Societv. London 1914) Vol. I, p. 115, expressly mentions the use of candles side by side with that of oil-lamps as will be seen from the following extract :—

Page 115—Speaking of the *Brahmins of Gujarat* Barbosa observes :—

".....they celebrate great ceremonies in honour of these *idols* entertaining them with great *store of candles* and oil-lamps and with bells after our fashion."

In the *Ain-i-Akhari* (A.D. 1590) the *Regulations¹ for the Illuminations* at Akbar's court are recorded in detail. They refer to the use of

1. The height of the brazen Pillar was 60 *Palms*. The Editor remarks :— "probably the Italian measure or *Palmo* is here referred to equal to about nine inches. The measure of a "*Palm*" may also be understood as equal to about 8½ inches (length of a hand) or 3 inches (breadth of a hand). If *Palm*=3 inches the height of the Pillar of 60 *Palms*=180 inches=15 feet. If *Palm*=9 inches the Pillar of 60 *Palms*=540 inches=45 feet—Scholars interested in the history of Indian architecture will be better able to visualize the brazen Pillar than myself.

.. These *Regulations for the Illuminations* (Vide pp. 42-43 of Francis Gladwin's *Eng. Trans. of Ain-i-Akhari*, Vol. I, Calcutta, 1897) may be reproduced here as they are very useful for reconstructing the history of lamps and lighting in Mediaeval India :—

Regulations for the Illumination—This is a spark of celestial fire.

At noon when the Sun enters the 14th degree of the sign *Aries*, they place in the Sun's rays a kind of shining onyx, called in the Hindustani language *Soorej Kerant* (सूर्यकरन्त) and put to it a piece of cotton which from heat of the stone catches fire. And this celestial fire is committed to the care of proper persons; and the lamp-lighters, link-men and cooks make use thereof for their respective offices ; and when the year expires, they catch new fire. The vessel this fire is preserved in, is called

(continued on the next page)

camphor candles at the Mughal Court in different kinds of *candle-sticks*. Camphor candles, three yards long and even more must have been a grand sight to see for Akbar's courtiers. As compared with the camphor candles the wax-candles used in Hindu temples (about A.D. 1518) in *Gujarat* and in *Kanara* (A.D. 1623) dwindle into insignificance. Wax-candles must have been in use in Akbar's time in the house-hold of common men, both Hindu and Muslim, but they don't appear to have been in favour at the imperial Court which was devoted to the pursuit of the sublime and the beautiful, irrespective of the cost involved in such a pursuit.

Though *Barbosa* refers to the use of *wax-candles* in Hindu Temples in A.D. 1518 in *Gujarat* Babur in his *Memoirs* deploras the *absence of candles and candle-sticks* in Hindustan in his diary for A.D. 1525-1526. Perhaps he did not notice them in Central and Northern India in the territories conquered by him. Are we, therefore, to suppose that the use of candles was unknown in India before A.D. 1498, the date of Portuguese advent? In the following extract from *Baburnama* (Trans.

(continued from the previous page)

Amangar or the fire-pot. There is also a shining white stone called *Chunder Kerant* (चन्द्रकान्त), which, upon being exposed to the moon's beams, drips water.

Every afternoon, at one Ghurry before sun-set his Majesty, if on horse-back slight; or if sleeping, he is awakened. And when the Sun sets, the attendants light up *twelve camphor candles in twelve candle-sticks of gold and silver* and bring them into the presence, when a singer of sweet melody, taking up one of the candle-sticks, sings a variety of delightful airs and concludes with imploring blessings on his Majesty.

It is impossible to describe the beauty and various forms of these *candle-sticks*: Some of them weigh *forty pounds* and upwards and are carved with a variety of figures. Some are *single*, others of *two branches* and others of more.

They cast *camphor candles three yards long, and some larger*, and they are *ornamented with flowers*. The palace is moreover illuminated within side and without with *flambeaux fixed upon poles with iron prongs*. The *first, second and third* nights of the moon when there is but little moonlight prongs are lighted with eight flambeaux. From the *fourth to the tenth* they decrease one in number every night, so that on the *tenth* night, when the moon shines very bright, one flambeaux is sufficient. And they continue in this state till the *fifteenth* and increase one every day from the *sixteenth to the nineteenth*. On the *twentieth* they continue the same, and on the *twenty first and twenty second* increase one daily: the *twenty third* is the same as the *twenty second* and from the *twenty fourth to thirtieth* night of the moon, eight prongs are lighted up. For each *huk* are allowed *one seer and half o. oil*, and *half a seer of rags*, more or less according to the size. In some places they burn lamps with *grease* but in palace nothing is used but *oil*.

In order to render the royal camp conspicuous to those who come from far, his Majesty has caused to be erected in the front of the *Doulet Khanah*, a pole upwards *forty yards high* which is supported by *sixteen ropes* and from the top of the pole is suspended a *large lantern* which they call *Akhasdeah* (आकाश दिवा) or आकाशदीप).

These offices are performed by many of the *Munsabders*, *Abdeens*, and other military men. The pay of a foot-soldier never exceeds two thousand four hundred, and is never less than 80 *Denns*."

by A. S. Beveridge, Vol. II, London, 1922, p. 518) we get a list of the defects of Hindustan, among which the *absence of candles and candle-sticks* is emphatically deplored :—

“Hindustan is a country of few charms. Its people have no good looks; of social intercourse, paying and receiving visits there is noneno hot-baths, no colleges, *no candles, torches or candle-sticks*.”

In place of candle and torch they have a great dirty gang they call *lamp-men (diwafi)*.....This is the Hindustan substitute for lamps and candle-sticks.....’

We must now try to trace references to the use of candles in India by Muslims prior to A. D. 1500 and later than the Muslim conquest of Sind in A.D. 712.

In concluding this paper I must not fail to take notice of the so-called *candle-stick*¹ discovered in Mohenjo Daro excavations, about which Ernest Mackay remarks as follows on p. 137 of his *Indus Civilization* (London, 193) :—

“A pottery candlestick (Pl. O, 5) provides an answer to the question how the houses were lighted ; no dish or other receptacle has yet been found which, by definite marks of burning at the edge, can be identified as a lamp. It seems certain that some vegetable oil must have been used for lamps in the Indus valley, since lamps were undoubtedly known in neighbouring countries at that time ; in any case it is extremely interesting to discover that candles were also in use at such an early date.”

The *candlestick*² referred to above is described in detail by Mackay on p. 414 of Vol. I of *Further Excavations at Mohenjo-Daro*, 1938, New Delhi. If candlesticks were used in India as early as c. B. C. 3000 during the days of the Indus valley civilization one wonders why their use should not be referred to in the extant Indian literature from the *Rigveda* onwards upto the end of the 15th century A. D. Though the *bees-wax* was known in India from very early times and was used for

1. I have to thank my friend Dr. A. D. Pusalker, Assistant Director, Bharatiya Vidyā Bhavan, Bombay, for drawing my attention to this candlestick and Mr. Mackay's remarks on it.

2. In reply to my inquiry about candles in India in pre-Mughal times Dr. H. Goetz, Curator, Baroda Museum, wrote on 2-10-1947. —

“As to candles I should regard Mackay's identification of a candle-stick from Mohenjo Daro very improbable. In India I cannot trace candles before Mughal invasion. Thus the candle might have been introduced from China. But I do not feel sure, as candles played a great role in Christian ritual since olden times. However, I do not know since when exactly. The oldest European candle-sticks which I know are of the 11th century. On ground of quite a number of considerations, which I cannot specify here, I should be inclined to search the origin of the wax-candle in late T'ang China.”

medical and other purposes such as the preparation of wax-moulds for casting metal images, no trace of bees-wax used for the manufacture of candles has yet been found so far as my knowledge goes. This view of mine gets some confirmation from the statement of Emperor Baber in his *Memoirs* for A. D. 1525-26 deploring the absence of candles and candlesticks in *Hindustan* by which he evidently means Northern Indian territory conquered by him. The use of candles in Hindu temples in Gujarat referred to by Barbosa in A. D. 1518 only shows that they were getting current in India towards the end of the 15th century perhaps as a result of Portuguese contact. This is the only conclusion I can draw from the evidence so far traced and recorded.

Before closing this paper I record the following reference to "waxen tapers" used in a Hindu Chapel (before the goddess *Kālī*) at Calicut between A. D. 1502 and 1508 :—

In the *Travels* of the Italian traveller *Varthema* (Argonaut Press, London, 19 8) chap. VII is devoted to *Calicut* : pp. 55-70). While describing the King of Calicut and his Chapel *Verthema* refers to the sacrifice of a cock before the goddess (*Sathanas* = *Kālī*) in the Chapel and observes :—

Page 56—"They have a certain small table.....extremely well adorned with roses, flowers and other ornaments. Upon this table they have the blood of a cock,.....they have a silver knife with which they have killed the cock, and which they tinge with the blood..... and finally all that blood is burnt, the waxen tapers being kept lighted during the whole time."

The above reference to "waxen tapers" by *Verthema* is the earliest so far traced by me and hence important for my inquiry. The references to the use of wax-candles by *Varthema*, *Barbosa* and *Pietro Della Valle* between A. D. 1502 and 1623 illustrate the use of candles along the coast line of India.

Chronology	Reference
c. B. C. 3000	—Supposed <i>candle-stick</i> found at Mohenjo-Daro. — <i>Bees-wax</i> candles mentioned by <i>Roman</i> writers. — <i>candles</i> and <i>candle-sticks</i> mentioned in Holy Bible.
Between A. D. 500 and 1100	— <i>Turushka taila</i> for feeding lamps mentioned in <i>जापेयसूची-मूलकल्प</i> and <i>Pārasika taila</i> (Persian oil) mentioned by Bilhaṇa in the <i>विक्रमाङ्कदेवचरित</i> .
A. D. 1000-1100	—Use of ornamental candle-sticks in Europe.
A. D. 1200-1300	—Guild of travelling <i>candle-makers</i> in <i>Paris</i> .
A. D. 1502-1508	— <i>Varthema</i> refers to "waxen tapers" used in a Hindu Chapel at Calicut.
A. D. 1518	— <i>Barbosa</i> refers to the use of <i>candles</i> and oil-lamps by the Brahmins of Gujarat before idols during ceremonies in their honour.
A. D. 1525	— <i>Baber</i> deplors the <i>absence of candles and candle-sticks</i> in Hindusthan.
A. D. 1590	— <i>Ain-i-Akbarī</i> mentions <i>camphor-candles</i> (three yards long) and gold and silver <i>candlesticks</i> at Akbar's court.
A. D. 1623 (November)	— <i>Pietro Della Valle</i> refers to the use of " <i>wax-candles</i> " in a Hindu temple at Ikkeri (in the Shimoga District of Mysore).
A. D. 1672-1681	— <i>John Fryer</i> in his description of <i>Goa</i> mentions " <i>Wax for tapers</i> " and " <i>massy silver-candle-sticks</i> used in Churches at <i>Goa</i> . — <i>Tavernier</i> refers to " <i>wax-candles</i> " before an altar in a <i>Pagoda at Siam</i> . — <i>Tavernier</i> mentions <i>wax-tapers</i> used by <i>Dutch Sailors</i> .
c. A. D. 1676	—The <i>Rājavyavahāra-kūṭa</i> mentions मोमदानी (candlestick) and मोमबत्ती (candle).
c. A. D. 1775- A. D. 1800	— <i>Golden age</i> of the candlestick in Europe.
A. D. 1723	—750 <i>candles</i> and 20 <i>Rose-water</i> bottles procured from the English by King Shahu of Satara.
A. D. 1854	—Introduction of modern candles of <i>paraffin wax</i> etc.

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